

SITE PLAN FOR
PROJECT HERCULES

TAX MAP #63 A 80
APPOMATTOX COUNTY, VA 24522
460 PRECINCT
WRECK ISLAND VOTING DISTRICT

PROJECT CONTACT LIST

<u>APPLICANT</u>	<u>PLANNING/ZONING</u>
ADP APPOMATTOX DATA HUB, LLC 107 ELM STREET, SUITE 501 STAMFORD, CT 06902 CONTACT: JOHN DELACIO EMAIL: JOHN.DELACIO@AVAIOCAPITAL.COM	APPOMATTOX COUNTY PLANNING DEPARTMENT 153A MORTON LANE APPOMATTOX, VA 24522 TEL: 434-352-8183
<u>OWNER</u>	<u>PUBLIC UTILITIES</u>
ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY PO BOX 863 APPOMATTOX, VA 24522	TOWN OF APPOMATTOX PUBLIC WORKS DEPARTMENT 210 LINDEN STREET P.O. BOX 705, APPOMATTOX, VA 24522 TEL: 434-352-8268
<u>CIVIL ENGINEER</u>	<u>FIRE DEPARTMENT</u>
KIMLEY-HORN AND ASSOCIATES, INC. 6086 PARAGON PLACE, SUITE 310 RICHMOND, VA 23230 TEL: (804) 462-9704 CONTACT: JOSH MACDONALD, PE EMAIL: JOSH.MACDONALD@KIMLEY-HORN.COM	APPOMATTOX VOLUNTEER FIRE CO 719 CONFEDERATE BLVD APPOMATTOX, VA 24522 TEL: 434-352-8866
<u>ARCHITECT</u>	
JACOBS 1999 BRYAN ST, DALLAS, TX 75201 TEL: 214-920-8319 CONTACT: DAVID PENSHORN, PE EMAIL: DAVID.PENSHORN@JACOBS.COM	
<u>SURVEYOR</u>	
GRS GROUP, LLC 6703 DELAND COURT SPRINGFIELD, VA 22152 TEL: 703-727-5828 CONTACT: KEVIN STEINHILBER EMAIL: KEVIN@GRSGROUPLLC.COM	

VDOT'S ACCEPTANCE OF THIS PLAN, AS INDICATED BY THEIR SIGNATURE, DOES NOT RELIEVE THE ENGINEER OF RECORD, WHOSE PROFESSIONAL SEAL IS ON THIS PLAN, FROM COMPLYING WITH ALL VDOT REGULATIONS, SPECIFICATIONS, STANDARDS AND APPLICABLE LAWS. THE ENGINEER OF RECORD IS RESPONSIBLE FOR ENSURING THE COMPLETENESS AND ACCURACY OF THEIR PLANS. VDOT'S REVIEW OF THIS PLAN DOES NOT GUARANTEE IT IS ERROR-FREE. ANY ERRORS OR OMISSIONS DISCOVERED DURING CONSTRUCTION REMAIN THE RESPONSIBILITY OF THE ENGINEER OF RECORD.

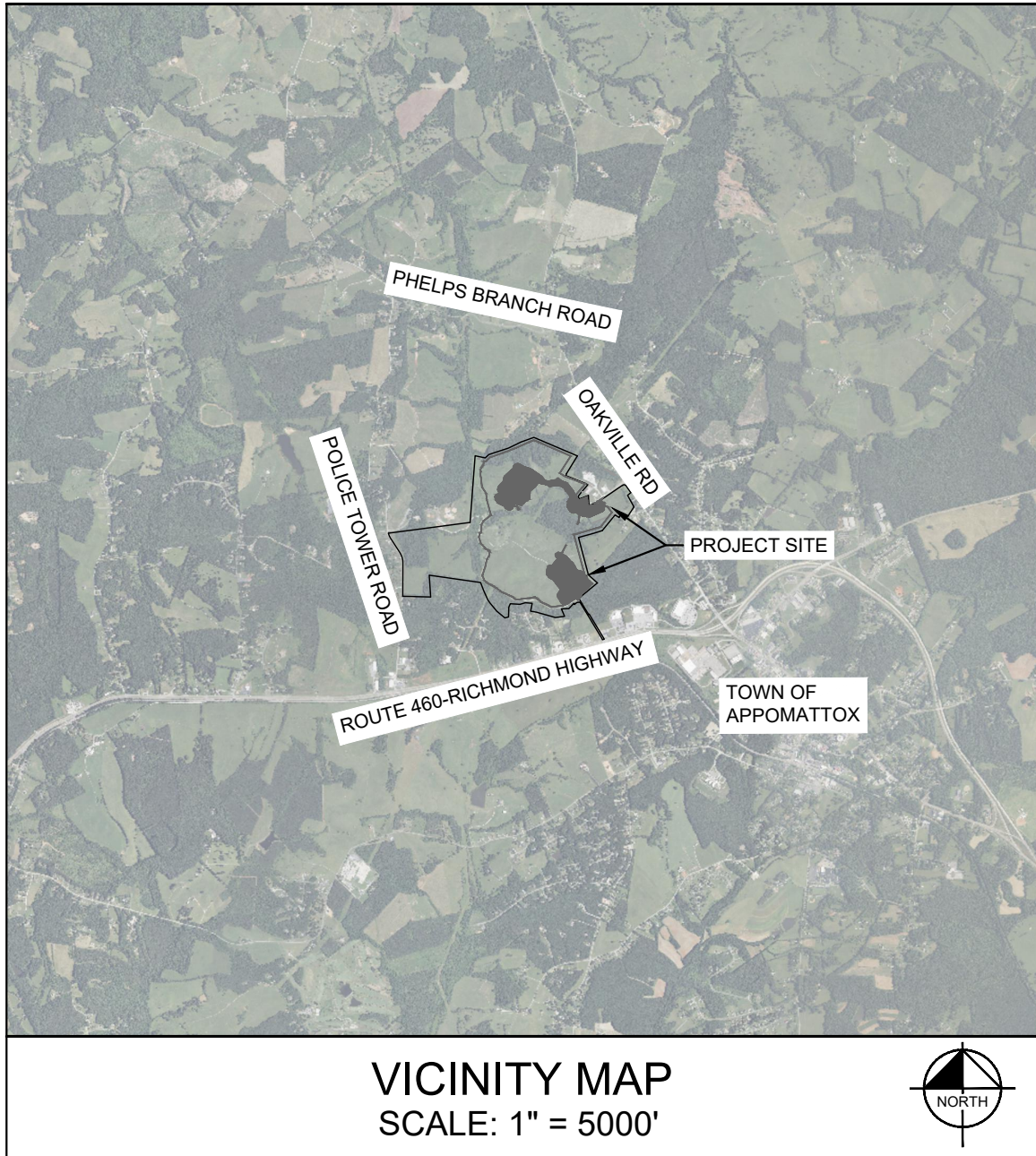
HORIZONTAL DATUM IS BASED ON NAD83 (NA2011), VIRGINIA STATE GRID, SOUTH ZONE. VERTICAL DATUM IS BASED ON NAVD88. DATUM ESTABLISHED THROUGH LEICA SmartNET GPS OBSERVATIONS, DECEMBER 2019 - JANUARY 2020.

SINCE SITE DISTURBANCE IS GREATER THAN ONE (1) ACRE, A VSMP CONSTRUCTION PERMIT IS REQUIRED. CONTRACTOR TO OBTAIN VSMP PERMIT PRIOR TO LAND DISTURBANCE.

ONLY THE COMPLETE AND APPROVED PAPER COPY OF THE PLAN SET INCLUDING ALL SUBSEQUENT REVISIONS WILL SERVE AS THE OFFICIAL CONSTRUCTION PLANS.

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

VICINITY MAP



PROJECT DATA

SITE STATISTICS	
TAX MAP	63 A 80
TOTAL PARCEL AREA	±448.50
LAND DISTURBANCE (PHASE 1)	68.39 AC.
ZONED	M-IP (MASTER PLANNED-INDUSTRIAL)
EXISTING USE	VACANT, WOODED, PASTURE
PROPOSED USE	DATA CENTER, SUBSTATION
BUILDING SETBACKS REQUIRED (FRONT, SIDE, REAR)	30', 10', 10'
BUILDING SETBACKS PROVIDED (FRONT, SIDE, REAR)	GREATER THAN 30', 10', 10'
REQUIRED MINIMUM LOT AREA	1.5 AC
PROVIDED MINIMUM LOT AREA	448.80 AC
REQUIRED OPEN SPACE	MIN 20% PARCEL AREA (89.7 AC)
PROVIDED OPEN SPACE	>20% PARCEL AREA
MAXIMUM BUILDING HEIGHT	65'-0"
BUILDING FLOORS	2
PROVIDED DEVELOPABLE SF (PHASE 1)	±345,202 SF
PERCENT BUILDING COVERAGE TO OVERALL PARCEL	1.77%
HYDROLOGIC UNIT CODE	020802030404 - WRECK ISLAND CREEK
WATER	PUBLIC
SEWER	PUBLIC
HISTORIC FEATURES	NONE
KNOWN PLACES OF BURIAL	NONE
WETLANDS ON SITE	YES
WETLAND DISTURBANCE	NO
RPA ON SITE	NO
RPA DISTURBANCE	NO
FLOODPLAIN ON SITE	YES
FLOODPLAIN DISTURBANCE	NO
SOLID WASTE STORAGE	YES
SOLID WASTE COLLECTION	YES

APPOMATTOX COUNTY APPROVAL BLOCK

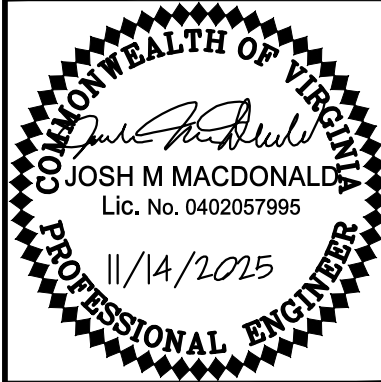
NAME: _____

SIGNATURE: _____

DATE: _____

JACOBS

Kimley»Horn
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6806 PARAGON PLACE, SUITE 310, RICHMOND, VA 23230
PHONE: 804-673-3882
WWW.KIMLEY-HORN.COM



KHA PROJECT	DATE	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
113706001	11/14/2025								

COVER SHEET

PROJECT HERCULES

VA

APPOMATTOX COUNTY

SHEET NUMBER
CA-100

Plotted By:McGray, Stephen Sheet Set:Kha Layout:CA-101 DEQ COVER SHEET November 05, 2025 04:09:48pm
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A. APPLICATION TYPE

☐ INITIAL SUBMISSION

☒ RESUBMISSION

☐ MODIFICATION with ACREAGE INCREASE

☐ MODIFICATION without ACREAGE INCREASE

DEQ PLAN # : _____

DEQ PLAN # : _____

DEQ PLAN # : _____

B. DESIGN PROFESSIONAL

CONTACT NAME: JOSH MACDONALD, P.E.
MAILING ADDRESS: 6086 PARAGON PLACE, RICHMOND, VIRGINIA 2320
TELEPHONE NO: (804) 462-9704
EMAIL ADDRESS: JOSH.MACDONALD@KIMLEY-HORN.COM

C. PROJECT DEVELOPER

PROJECT DEVELOPER: ADP APPOMATTOX DATA HUB LLC
CONTACT NAME: KEVIN MURPHY
MAILING ADDRESS: 107 ELM ST - 5TH FL; STAMFORD, CT 06902
EMAIL ADDRESS: KEVIN.MURPHY@AVAIOCAPITAL.COM

D. PROPERTY OWNER

PROJECT DEVELOPER: ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY
CONTACT NAME: JOHNNIE ROARK
MAILING ADDRESS: PO BOX 863, APPOMATTOX, VA 24522
TELEPHONE NO: 434-352-8183
EMAIL ADDRESS: JOHNNIE.ROARK@APPOMATTOXCOUNTYVA.GOV

E. PROJECT INFORMATION

PROJECT NAME: PROJECT HERCULES
ADDRESS: N/A
COUNTY (IF NOT LOCATED WITHIN A CITY): APPOMATTOX COUNTY
TAX MAP NO. (OR GPIN): 63 A 80
LATITUDE (6 DIGITS, DECIMAL DEGREES): 37.373199
LONGITUDE (6 DIGITS, DECIMAL DEGREES): -78.853854
TOTAL LAND AREA OF DEVELOPMENT (1/100th ACRE): 448.50
TOTAL LAND AREA OF SWM COMPLIANCE (1/100th ACRE): 68.39 AC.
ESTIMATED AREA TO BE DISTURBED (1/100th ACRE): 68.39 AC.
PROJECT STATUS: ☐ FEDERAL ☐ STATE ☒ PUBLIC ☒ PRIVATE
PART OF A LARGER COMMON PLAN OF DEVELOPMENT? ☒ YES ☐ NO
OFFSITE IMPROVEMENTS PROPOSED? ☒ YES ☐ NO

F. OFFSITE SUPPORT ACTIVITY INFORMATION

OFFSITE SUPPORT ACTIVITY NAME: N/A
ADDRESS (911 ADDRESS IF AVAILABLE):
COUNTY (IF NOT LOCATED WITHIN A CITY):
TAX MAP NO. (OR GPIN):
LATITUDE (6 DIGITS, DECIMAL DEGREES):
LONGITUDE (6 DIGITS, DECIMAL DEGREES):
ESTIMATED AREA TO BE DISTURBED (1/100th ACRE):

G. PLAN INFORMATION

GENERAL PLAN INFORMATION		SHEET NO.
1. VICINITY MAP		CA-100
2. NORTH SCALE		ALL
3. PLAN LEGEND		ALL
4. PLAN SCALE		ALL
5. SHEET INDEX		CA-102

PRE-DEVELOPMENT SITE INFORMATION		SHEET NO.
6. NARRATIVE OF PRE-DEVELOPMENT SITE CONDITIONS		CE-501
7. EXISTING PROPERTY BOUNDARIES (INC. LEASE BOUNDARIES)		CV-101 - CV-106
8. EXISTING TOPOGRAPHY (EXISTING CONTOURS)		CV-100 - CV-106
9. EXISTING STREAMS, PONDS, DITCHES, WETLANDS & OTHER WATERS		CV-101 - CV-106
10. EXISTING KARST FEATURES		N/A
11. EXISTING 100-YEAR FEMA FLOODPLAIN		CV-101 - CV-106
12. RESOURCE PROTECTION AREAS		CV-101 - CV-106
13. EXISTING IMPROVEMENTS (BUILDINGS, ROADS, PARKING & UTILITIES)		N/A
14. EXISTING VEGETATIVE AREAS (FOREST, OPEN SPACE & TURF)		CV-101 - CV-106
15. EXISTING LAND COVER / USE TABULATION		CG-203 - CG-204
16. EXISTING EASEMENTS (DEED BOOK/PAGE REF. OR INSTRUMENT #)		CV-101 - CV-106
17. PRE-DEV. DRAINAGE AREAS (ACREAGE, DIVIDES & FLOW PATHS)		CG-201 - CG-202

POST-DEVELOPMENT SITE INFORMATION		SHEET NO.
18. NARRATIVE OF POST-DEVELOPMENT SITE CONDITIONS		CS-100
19. PROPOSED PROPERTY BOUNDARIES (INC. LEASE BOUNDARIES)		CS-100
20. PROPOSED LIMITS OF LAND DISTURBANCE (CLEARING & GRADING)		CS-100 - CS-106
21. PROPOSED GRADING (PROPOSED CONTOURS INC. SWM PRACTICES)		CG-100 - CG-106
22. PROPOSED 100-YEAR FLOODPLAIN		N/A
23. PROPOSED IMPROVEMENTS (BLDGS, ROADS, PARKING & UTILITIES)		CS-100 - CS-106
24. PROPOSED VEGETATIVE AREAS (FOREST, OPEN SPACE & TURF)		CS-100 - CS-106
25. PROPOSED LAND COVER / USE TABULATION		CG-203
26. PROPOSED EASEMENTS		CS-100 - CS-106
27. POST-DEV. DRAINAGE AREAS (ACREAGE, DIVIDES & FLOW PATHS)		CG-203

EROSION & SEDIMENT CONTROL INFORMATION		SHEET NO.
28. NARRATIVE OF PROP. EROSION & SEDIMENT CONTROLS		CE-501
29. MINIMUM STANDARDS (9VAC25-840-40)		CE-501
30. CRITICAL EROSION AREAS (VSMH, LATEST EDITION)		CE-101 - CE-103
31. PROP. EROSION & SEDIMENT CONTROLS (VSMH, LATEST EDITION)		CE-101 - CE-103
32. EROSION & SEDIMENT CONTROL DETAIL DRAWINGS		CE-502 - CE-504
33. HYDROLOGIC & HYDRAULIC COMPUTATIONS		SWM/ESC NARRATIVE
34. INSPECTION, OPERATION & MAINTENANCE REQUIREMENTS		CE-501

PLAN SUBMISSION CHECKLIST

[SEE DEQ GUIDANCE MEMO NO. 22-2012 FOR ADDITIONAL INSTRUCTIONS]

G. PLAN INFORMATION (CONT.)

POST-DEVELOPMENT WATER QUANTITY & WATER QUALITY INFO.	SHEET NO.
35. NARRATIVE OF PROP. SWM FACILITIES / PRACTICES	CG-209
36. PROP. SWM FACILITIES / PRACTICES	CG-401 - CG-504
37. HYDROLOGIC & HYDRAULIC COMPUTATIONS *	SWM/ESC NARRATIVE APPENDIX K, M, N, O, P, Q
38. LONG-TERM INSP., OPERATION & MAINTENANCE REQUIREMENTS	CG-401 - CG-406
39. OUTFALL SUMMARY TABLE WITH PRE, POST, AND ALLOWABLE DISCHARGE RATES USED FOR QUANTITY ASSESSMENT; IDENTIFY THE TYPE OF CONVEYANCE SYSTEM AT EACH POINT OF DISCHARGE	CG-209

* STORM DRAIN DESIGN COMPUTATIONS AND HYDRAULIC GRADE LINE COMPUTATIONS SHOULD BE PROVIDED AND SHOULD INCLUDE EACH PIPE SEGMENT. IN ADDITION, STORM SEWER LONGITUDINAL PROFILES WITH HYDRAULIC GRADE LINE ELEVATIONS SHOULD BE INCLUDED FOR VISUAL REPRESENTATION. DESIGN CALCULATIONS AND CROSS-SECTIONS SHOULD BE PROVIDED FOR ALL OPEN MANMADE CHANNELS. CROSS-SECTIONS SHOULD SHOW AND LABEL THE 1-YEAR, 2-YEAR, AND 10-YEAR WATER SURFACE ELEVATIONS.

SOILS & GEOTECHNICAL INFORMATION	SHEET NO.
40. SOILS MAP (INC. NRCS SOIL TYPES)	SWM/ESC NARRATIVE APPENDIX B
41. SOILS TABULATION	SWM/ESC NARRATIVE APPENDIX B
42. GEOTECHNICAL INVESTIGATION / REPORT	N/A

OTHER SUPPORTING INFORMATION	SHEET NO.
43. BOUNDARY SURVEY (18VAC10-20-370)	ATTACHMENT
44. PHYSICAL IMPROVEMENT SURVEY (18VAC10-20-380)	ATTACHMENT
45. TOPOGRAPHIC SURVEY (18VAC10-20-382)	ATTACHMENT

H. LAND COVER TABULATION

EXISTING LAND COVER / USE	ACRES
1. IMPERVIOUS COVER	0.39
IMPERVIOUS COVER (% OF TOTAL LAND AREA OF DEVELOPMENT)	0.62%
2. PASTURE	54.23
3. OPEN SPACE	--
4. FOREST COVER	7.76
5. PRIME FARMLAND (NRCS FARMLAND CLASSIFICATION)	--

PROPOSED LAND COVER	ACRES
1. IMPERVIOUS COVER	28.69
IMPERVIOUS COVER (% OF TOTAL LAND AREA OF DEVELOPMENT)	45.99%
2. MANAGED TURF	33.69
3. OPEN SPACE	--
4. FOREST COVER	--

MAP UNIT SYMBOL	MAP UNIT NAME	HSG	K FACTOR	ERODIBILITY	ACRES IN LOD	% OF LOD
5B	CECIL SANDY LOAM	B	0.24	HIGH	5.1	13.9%
7B	CULLEN CLAY LOAM	B	0.28	LOW	8.3	22.7%
15C	MECKLENBURG-POINDEXTER COMPLEX	C	0.43	MODERATE	8.5	23.1%
15D	MECKLENBURG-POINDEXTER COMPLEX	C	0.43	MODERATE	0.2	0.6%
18C	PACOLET-LOUISBURG COMPLEX	B	0.24	HIGH	14.5	39.6%

J. EROSION & SEDIMENT CONTROL

ESC PLAN VARIANCE REQUEST: ☐ YES ☒ NO

IF "YES", PLEASE PROVIDE JUSTIFICATION FOR THE VARIANCE REQUEST:

K. STORMWATER MANAGEMENT

APPLICABLE DESIGN CRITERIA: ☒ X PART II B
☐ PART II C (GRANDFATHERING)
☐ PART II C (TIME LIMITS ON APPLICABILITY)
☐ "SAFE HARBOR"

OFFSITE COMPLIANCE OPTION(S)? ☐ YES ☒ NO

IF "YES", PLEASE DESCRIBE THE OFFSITE COMPLIANCE OPTION(S):

DISCHARGE TO A KARST FEATURE(S)? ☐ YES ☒ NO

IF "YES", PLEASE DESCRIBE THE KARST FEATURE(S):

IF "YES", PLEASE DESCRIBE ANY KNOWN NATURAL HERITAGE RESOURCES IN THE KARST FEATURE(S):

SWM PLAN EXCEPTION REQUEST? ☐ YES ☒ NO

IF "YES", PLEASE PROVIDE THE JUSTIFICATION FOR THE EXCEPTION REQUEST:

L. STORMWATER MANAGEMENT FACILITIES / PRACTICES

FACILITY NO.	FACILITY TYPE	LAT.	LONG.	REC. WATER	TOT. ACRES TREATED	IMP. ACRES TREATED	PLAN SHEET NO.
POND A	LEVEL 2 WET POND	37.3745	-78.8586	WRECK ISLAND CREEK	23.29	13.37	CG-401 & CG-402
POND B	LEVEL 2 WET POND	37.3741	-78.8518	WRECK ISLAND CREEK	4.84	1.82	CG-403 & CG-404
POND C	LEVEL 2 WET POND	37.3670	-78.8528	WRECK ISLAND CREEK	14.11	10.76	CG-405 & CG-406

M. OWNER / DEVELOPER CERTIFICATION

I hereby certify that coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities will be obtained, if required, prior to commencing land-disturbing activities.

I hereby certify that all wetlands permits required by law will be obtained, if required, prior to commencing land disturbing activities.

I hereby certify that permission to construct any offsite improvements, if proposed, will be obtained prior to commencing land disturbing activities.

I hereby certify that all offsite nonpoint source nutrient credits will be obtained, if proposed, prior to commencing land disturbing activities.

I hereby certify that construction record drawings (as-built drawings) for all permanent stormwater management facilities/practices will be prepared and submitted to DEQ prior to project closeout. The construction record drawings will be appropriately sealed and by a professional registered in the Commonwealth of Virginia, certifying that the stormwater management facilities/practices have been constructed in accordance with the approved plan(s).

I hereby certify that a long-term maintenance agreement(s) for all permanent stormwater management facilities/practices and other techniques specified to manage the quality and quantity of runoff will be submitted to DEQ, if required, prior to project closeout. The long-term maintenance agreement(s) will be recorded in the local land records prior to termination of coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities.

OWNER / DEVELOPER NAME: ADP APPOMATTOX DATA HUB, LLC

OWNER / DEVELOPER TITLE: VICE PRESIDENT

SIGNATURE: *Kevin Murphy*

DATE: 11/14/2025

N. DESIGN PROFESSIONAL CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I hereby certify that the plans and hydrologic & hydraulic computations herein are in compliance with the Stormwater Management Act and attendant regulations, the Erosion and Sediment Control Law and attendant regulations, and applicable DEQ guidance.

DESIGN PROFESSIONAL NAME: JOSH MACDONALD, P.E.
LICENSE NO.: 0402057995

SIGNATURE: *Josh MacDonald*

DATE: 11/14/2025

O. DUAL COMBINED ADMINISTRATOR (DCA) CERTIFICATION

I hereby certify that I have reviewed the plans and hydrologic & hydraulic computations herein for compliance with the Stormwater Management Act and attendant regulations, the Erosion and Sediment Control Law and attendant regulations, and applicable DEQ guidance, and recommend the plans and computations for DEQ approval.

DCA Name: Cutter Sydnor

DCA Certification No.: DCA0602

Signature: *Cutter Sydnor*

Date: November 14, 2025

DEQ PLAN #

APPROVAL BLOCK

DEQ PLAN # 20__ - 0__

DEPT. OF ENVIRONMENTAL QUALITY

DATE

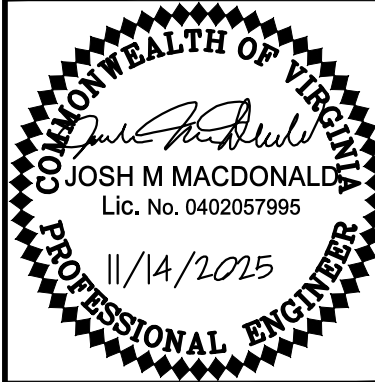
DESIGN PROFESSIONAL

KIMLEY HORN
JOSH MACDONALD
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Jacobs

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6806 PARAGON PLACE, SUITE 310, RICHMOND, VA 23230
PHONE: 804-673-3882
WWW.KIMLEY-HORN.COM



KHA PROJECT 113706001	DATE 11/14/2025	SCALE AS SHOWN	DESIGNED BY STM	DRAWN BY STM	CHECKED BY JMM
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DEQ COVER SHEET

PROJECT HERCULES

VA

APPOMATTOX COUNTY

SHEET NUMBER
CA-101

Plotted By:McCray, Stephen Sheet Set:Kha Layout:CA-102 SHEET INDEX November 05, 2025 04:09:52pm
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SHEET INDEX

SHEET NO.	DESCRIPTION
CA-100	COVER SHEET
CA-101	DEQ COVER SHEET
CA-102	SHEET INDEX
CA-103	GENERAL NOTES
CX-101 THRU CX-103	ALTA NSPS LAND TITLE SURVEY
CV-100	OVERALL EXISTING CONDITIONS & DEMOLITION PLAN
CV-101 THRU CV-107	EXISTING CONDITIONS & DEMOLITION PLAN
CE-100	OVERALL PHASE I EROSION AND SEDIMENT CONTROL
CE-101 THRU CE-107	PHASE I EROSION AND SEDIMENT CONTROL
CE-108 THRU CE-114	PHASE II EROSION AND SEDIMENT CONTROL
CE-501	EROSION CONTROL NARRATIVE
CE-502 THRU CE-504	EROSION AND SEDIMENT CONTROL DETAILS
CS-100	OVERALL SITE PLAN
CS-101 THRU CS-107	SITE PLAN
CS-501 THRU CS-502	SITE DETAILS
CG-100	OVERALL GRADING PLAN
CG-101 THRU CG-107	GRADING PLAN
CG-108	DETAILED GRADING PLAN
CG-109 THRU CG-116	SITE FENCE EXTENSION
CG-201	PRE DEVELOPMENT DRAINAGE AREA MAP
CG-202	POST DEVELOPMENT DRAINAGE AREA MAP
CG-203	PRE DEVELOPMENT LAND COVER
CG-204	POST DEVELOPMENT LAND COVER
CG-205	STORMWATER QUALITY PLAN
CG-206	PRE DEVELOPMENT DOWNSTREAM ANALYSIS
CG-207	POST DEVELOPMENT DOWNSTREAM ANALYSIS
CG-208	DOWNSTREAM ANALYSIS CROSS SECTIONS
CG-209	STORMWATER QUANTITY PLAN
CG-210 THRU CG-211	DRAINAGE AREA MAP
CG-301 THRU CG-308	STORMWATER PROFILES
CG-309 THRU CG-310	STORM WATER PROFILES
CG-401 THRU CG-402	STORMWATER POND DETAILS - POND A
CG-403 THRU CG-404	STORMWATER POND DETAILS - POND B
CG-405 THRU CG-406	STORMWATER POND DETAILS - POND C
CG-501	STORMWATER TABLES AND DETAILS
CG-503 THRU CG-504	RAINWATER HARVESTING DETAILS
CG-505	ACCESS ROAD PROFILE
CG-506	ACCESS ROAD AND ROADSIDE DITCH PROFILES
CU-100	OVERALL UTILITY PLAN
CU-101 THRU CU-104	UTILITY PLAN
CU-201 THRU CU-202	SEWER PROFILES
CU-207 THRU CU-211	WATER PROFILES
CU-301	FIRE HYDRANT COVERAGE MAP
CU-501 THRU CU-502	UTILITY DETAILS
CP-100	OVERALL PLANTING PLAN
CP-101 THRU CP-104	PLANTING PLAN
CP-200 THRU CP-205	FENCE LINE PLANTING PLAN
CP-501	PLANTING NOTES & DETAILS
CP-502	PLANTING DETAILS & TABULATIONS
CR-101 THRU CR-104	SIGHT DISTANCES AND TRUCK TURNS
CL-100	OVERALL LIGHTING PLAN
CL-101 THRU CL-105	LIGHTING PLAN
CL-106	FIXTURE SCHEDULE AND DETAILS



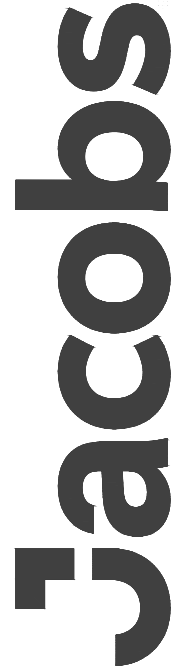
KHA PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
113706001	11/14/2025	AS SHOWN	STM	STM	JMM

SHEET INDEX

PROJECT HERCULES
APPOMATTOX COUNTY
VA

SHEET NUMBER
CA-102

Kimley»Horn
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6806 PARAGON PLACE, SUITE 310, RICHMOND, VA 23230
PHONE: 804-673-3882
WWW.KIMLEY-HORN.COM



1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM WITH THESE DRAWINGS, PROJECT SPECIFICATIONS, WITH ALL CURRENT APPLICABLE CODES, AND, UNLESS OTHERWISE SPECIFIED, WITH THE LATEST REVISIONS OF THE FOLLOWING REFERENCE DOCUMENTS:
 - A. APPOMATTOX COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS
 - B. TOWN OF APPOMATTOX UTILITY CONSTRUCTION STANDARDS AND SPECIFICATIONS
 - C. VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD & BRIDGE SPECIFICATIONS
 - D. VDOT ROAD AND BRIDGE STANDARDS
 - E. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
 - F. VIRGINIA WORK AREA PROTECTION MANUAL.
 - G. VIRGINIA STORMWATER MANAGEMENT HANDBOOK (VSMH)
 - H. VIRGINIA DEPARTMENT OF HEALTH (VDH) SPECIFICATIONS

1. ALL CONSTRUCTION SHALL CONFORM WITH APPLICABLE STATE (INCLUDING VDOT) AND LOCAL CONSTRUCTION STANDARDS AS IDENTIFIED IN THESE PLANS. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE PERMITS AND LICENSES AND MAINTAIN COPIES OF THEM ON-SITE AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN A SET OF CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) ON-SITE AT ALL TIMES DURING CONSTRUCTION.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR THE RELATIVE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL COMPLIANCE WITH LOCAL REGULATIONS AND CODES.
3. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
4. ALL PAINT STRIPING, PAVEMENT MARKINGS, AND SIGNAGE SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," MOST CURRENT REVISION OR AS OTHERWISE SPECIFIED. ALL REFERENCED SIGN STANDARDS ARE TAKEN FROM THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," ALL NEW SIGNS SHALL BE MOUNTED ON GALVANIZED POSTS AND IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES ASSOCIATED WITH THE PROJECT WORK SCOPE DURING CONSTRUCTION. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" OF VIRGINIA @ 811 FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE PROJECT SITE.
6. ANY DAMAGE OCCURRING TO THE EXISTING SITE INFRASTRUCTURE ON THIS OR THE ADJACENT SITE DURING THE CONSTRUCTION OPERATIONS AND/OR MOBILIZATION, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL EXISTING DAMAGED ITEMS INCLUDING CONCRETE AND/OR PAVEMENT SECTIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITIONS PRIOR TO PROJECT COMPLETION AT THE EXPENSE OF THE CONTRACTOR.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WITH MATCHING MATERIALS ANY PAVEMENT, DRIVEWAYS, WALKS, CURBS, ETC. THAT MUST BE CUT OR THAT ARE DAMAGED DURING CONSTRUCTION INSIDE AND OUTSIDE OF THE LIMITS OF CONSTRUCTION.
8. ANY AND ALL UTILITIES AND/OR OBSTRUCTIONS (POWER POLES, TELEPHONE PEDESTALS, GUY WIRES, WATER METERS, ETC.) THAT ARE REQUIRED TO BE RELOCATED OR ADJUSTED DUE TO CONSTRUCTION SHALL BE DONE SO AT THE OWNERS/DEVELOPERS EXPENSE.
9. SLOPES WITHIN THE LIMITS OF THE HANDICAPPED PARKING AREAS SHALL NOT EXCEED 1.5% IN ANY DIRECTION. CROSSLINKS AND SIDEWALKS SHALL HAVE A MAXIMUM GROSS SLOPE OF 1.5% AND A MINIMUM LONGITUDINAL SLOPE OF 5% IN DIRECTION OF TRAVEL. SLOPES IN HANDICAP RAMPS SHALL BE BUILT IN CONFORMANCE WITH ILATEST ADA CRITERIA AND LOCAL DESIGN STANDARDS.
10. THE CONTRACTOR IS RESPONSIBLE TO REMOVE ALL THE REMOVED/DEMOLISHED MATERIAL FROM THE PROJECT SITE AND DISPOSE OF SAME IN A LEGAL MANNER.
11. TRYING TO EXISTING PAVEMENT: EXISTING PAVEMENT SHALL BE NEATLY SAW CUT TO A STRAIGHT LINE AND ALL PAVING ON THE NEW PAVEMENT SIDE OF THE CUT SHALL BE COMPLETELY REMOVED AND REPLACED WITH SPECIFIED MATERIALS. THE CUT LINE SHALL BE FULL-DEPTH AND COATED WITH A TACK COAT TO FURNISH A BOND BETWEEN THE EXISTING SURFACE COURSE AND THE NEW SURFACE COURSE.
12. TRYING TO EXISTING CURB/GUTTER: THE EXISTING PAVEMENT SHALL BE NEATLY SAW CUT AND REMOVED FOR A DISTANCE OF 20" FROM FACE OF THE CURB AND 20" FROM THE EDGE OF CURB AND GUTTER AND THE SUBGRADE, BASE COURSE, AND PAVING REPLACED WITH NEW PRODUCTS.
13. THESE PLANS ARE BASED ON INFORMATION PROVIDED TO KIMLEY-HORN & ASSOCIATES, INC. AT THE TIME OF PLAN PREPARATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY KIMLEY-HORN & ASSOCIATES, INC. IF ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLAN, OR IF THE PROPOSED WORK WOULD BE INHIBITED BY ANY OTHER SITE FEATURES.
14. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND NOTIFICATION TO THE ENGINEER. NO CONSIDERATION WILL BE GIVEN TO CHANGE ORDERS FOR WHICH THE OWNER AND ENGINEER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM.
15. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER IN WRITING IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
16. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL/BUILDING PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY LOCATIONS.
17. IF THE CONTRACTOR DEVIATES FROM THE PLANS AND SPECIFICATIONS, INCLUDING THE NOTES CONTAINED THEREON, WITHOUT FIRST OBTAINING WRITTEN AUTHORIZATION FOR SUCH DEVIATIONS FROM THE OWNER AND ENGINEER, IT SHALL BE RESPONSIBLE FOR THE PAYMENT OF ALL COSTS TO CORRECT ANY WORK DONE, ALL FINES OR PENALTIES ASSESSED BY THE AGENCIES, AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ALL SUCH COSTS TO CORRECT ANY SUCH WORK AND FROM ALL SUCH FINES AND PENALTIES, COMPENSATION AND PUNITIVE DAMAGES AND COSTS OF ANY NATURE RESULTING THEREFROM.
18. BRACING OF UTILITY POLES MAY BE REQUIRED BY UTILITY COMPANIES WHEN TRENCHING OR EXCAVATION IS IN CLOSE PROXIMITY TO THE POLES. THE COST OF BRACING POLES WILL BE BORNE BY THE CONTRACTOR. THERE IS NO SEPARATE PAY ITEM FOR THIS WORK. THE COST IS INCIDENTAL TO THE VARIOUS PAY ITEMS FOR INSTALLATION OF PIPE.
19. ALL EXISTING TRAFFIC AND STREET SIGNS DISTURBED SHALL BE REINSTALLED WHERE APPLICABLE BY THE CONTRACTOR.
20. UNLESS THE PLANS SPECIFICALLY DICTATE TO THE CONTRARY, ON-SITE AND OTHER DIRECTIONAL SIGNS SHALL BE LOCATED OUT OF THE PEDESTRIAN AND AUTOMOBILE ROUTES AND SHALL BE LOCATED BETWEEN THREE TO FIVE FEET BEHIND THE NEAREST BACK OF CURB. SIGN HEIGHT, LOCATION, AND STRUCTURE SHALL BE SUCH THAT THE SIGNS POSE NO THREAT TO PUBLIC SAFETY.

1. PRIOR TO STARTING ANY DEMOLITION CONTRACTOR IS RESPONSIBLE FOR/TO:
 - A. ENSURING THAT COPIES OF ALL APPLICABLE PERMITS AND APPROVALS ARE MAINTAINED ON SITE AND AVAILABLE FOR REVIEW.
 - B. INSTALLING THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL AND/OR TREE PROTECTION MEASURES PRIOR TO SITE DISTURBANCE.
 - C. LOCATING (VERTICALLY AND HORIZONTALLY) ALL UTILITIES AND SERVICES, INCLUDING, BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES.
 - E. FAMILIARIZING THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION REQUIRED FOR THE PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
 - F. COORDINATION WITH UTILITY COMPANIES & ADJACENT LANDOWNERS/BUSINESSES REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS MAY BE REQUIRED TO MINIMIZE THE IMPACT ON THE AFFECTED PARTIES.
2. NEITHER KIMLEY-HORN & ASSOCIATES, INC. NOR THE OWNER IS RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. CONTRACTOR IS TO PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, FOLLOWING ALL OSHA REQUIREMENTS, TO ENSURE PUBLIC AND CONTRACTOR SAFETY.
3. THE CONTRACTOR SHALL PROVIDE ALL THE "MEANS AND METHODS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE. THE DEMOLITION CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS OF DAMAGE TO ALL ITEMS THAT ARE TO REMAIN AS A RESULT OF HIS ACTIVITIES.
4. IN THE ABSENCE OF SPECIFICATIONS, THE CONTRACTOR SHALL PERFORM EARTH MOVEMENT ACTIVITIES, DEMOLITION AND REMOVAL OF ALL FOUNDATION WALLS, FOOTINGS, AND OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE WITH DIRECTION BY OWNER'S STRUCTURAL OR GEOTECHNICAL ENGINEER.
5. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL," AS WELL AS FEDERAL, STATE, AND LOCAL REGULATIONS WHEN DEMOLITION RELATED ACTIVITIES IMPACT ROADWAYS OR ROADWAY RIGHTS - OF - WAY.
6. CONDUCT DEMOLITION ACTIVITIES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND OTHER ADJACENT FACILITIES. STREET CLOSURE PERMITS MUST BE RECEIVED FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY.
7. USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST AND DIRT RISING AND SCATTERING IN THE AIR IN ACCORDANCE WITH FEDERAL, STATE, AND/OR LOCAL STANDARDS. AFTER THE DEMOLITION IS COMPLETE, ADJACENT STRUCTURES AND IMPROVEMENTS SHALL BE CLEANED OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR "PRE-DEMOLITION" CONDITION.
8. CONTRACTOR IS RESPONSIBLE TO SAFEGUARD SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF UNAUTHORIZED PERSONS AT ANY TIME.
9. THIS DEMOLITION PLAN IS INTENDED TO IDENTIFY THOSE EXISTING ITEMS/CONDITIONS WHICH ARE TO BE REMOVED. IT IS NOT INTENDED TO PROVIDE DIRECTION OTHER THAN THAT ALL METHODS AND MEANS ARE TO BE IN ACCORDANCE WITH STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE.
10. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION WASTES AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND APPLICABLE CODES.

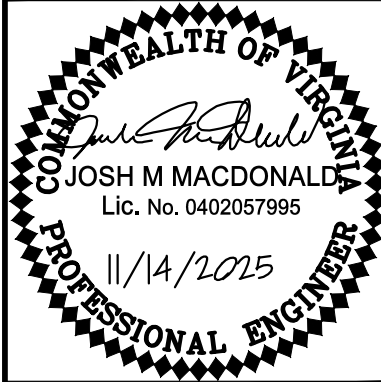
1. ALL STORM SEWER PIPES, MANHOLES, AND CURB INLETS SHALL BE CLEANED OF DEBRIS AND ERODED MATERIALS AT THE LAST STAGES OF CONSTRUCTION.
2. STORM DRAIN PIPE AND FLARED END SECTIONS ARE TO BE FURNISHED AND INSTALLED IN ACCORDANCE WITH SECTION 302 OF VDOT ROAD AND BRIDGE SPECIFICATIONS AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION C-76 FOR REINFORCED CONCRETE CULVERT AND STORM DRAIN PIPE. ALL PIPE FOR STORM DRAINS SHALL BE REINFORCED CONCRETE CLASS III UNLESS INDICATED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL USE A PERFORMED FLEXIBLE PLASTIC SEALING COMPOUND OF BUTYL, MASTIC ROPE SEALER - 1 SIZE, "EEZ STICK" AS MANUFACTURED BY CONCRETE PRODUCTS SUPPLY OR AN APPROVED EQUAL FOR SEALING WATER-TIGHT JOINTS. VERTICAL CLEARANCE OF 12" BETWEEN STORM AND OTHER UTILITIES IS REQUIRED UNLESS OTHERWISE NOTED.
3. ALL EXISTING STORM SEWER PIPES, DROP INLETS, AND CURB INLETS BEING UTILIZED BY A PART OF THE DRAINAGE SYSTEM SHALL BE CLEANED OF ERODED MATERIAL AT ALL STAGES OF CONSTRUCTION, AS DIRECTED BY THE ENGINEER. THE COST INCIDENTAL TO THIS IS TO BE INCLUDED IN THE CONTRACT PRICE FOR THE OTHER DRAINAGE ITEMS.
4. STORM SEWER PIPES AS SHOWN ON THE PLANS ARE MEASURED FROM THE CENTERLINE OF EACH STRUCTURE AND INVERT ELEVATIONS ARE ESTABLISHED BASED ON THIS CENTER LINE DISTANCE. LENGTH CALL OUTS FOR PIPES WITH FLARED END SECTIONS WILL BE MEASURED TO THE JOINT. CONTRACTOR SHALL LOCATE ALL END SECTIONS TO MATCH THE BANK SLOPE AND THE PIPE SLOPE SHALL BE ADJUSTED AS NECESSARY.
5. BOOT CONNECTIONS SHALL BE PROVIDED FOR ALL PLASTIC PIPES THAT TIE INTO A CONCRETE STRUCTURE.
6. GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START. SEE EXISTING CONDITIONS SHEET FOR UTILITY CONTACT INFORMATION.
7. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED AND APPROVED BY APPLICABLE AUTHORITY.
8. ALL ELEVATIONS ARE IN REFERENCE TO THE BENCHMARK, AND THIS MUST BE VERIFIED AND LOCATED BY THE GENERAL CONTRACTOR PRIOR TO GRADING BREAKING.
9. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE SO THAT "EEZ" WILL DRAIN BY GRAVITY FLOW ACROSS NEW PAVEMENT AREAS TO NEW OR EXISTING DRAINAGE INLETS OR SHEET FLOW OVERLAND.
10. THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL S.V.M.P. PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
11. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.
12. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
13. AFTER PLACEMENT OF SUBGRADE AND PRIOR TO PLACEMENT OF PAVEMENT, CONTRACTOR SHALL TEST AND OBSERVE PAVEMENT AREAS FOR EVIDENCE OF PONDING. ALL AREAS SHALL ADEQUATELY DRAIN TOWARDS THE INTENDED STRUCTURE OR EXISTING STORM RUNOFF. CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER AND ENGINEER IF ANY DISCREPANCIES ARE DISCOVERED.

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES OR UTILITIES BY OTHERS, AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND VARIOUS POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AS IDENTIFIED OR REQUIRED FOR PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SITE PLAN DOCUMENTS AND ARCHITECTURAL DESIGN FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS, DOOR ACCESS, AND EXTERIOR GRADING. THE UTILITY SERVICE SIZES ARE TO BE DETERMINED BY THE ARCHITECT. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES SERVICES WITH THE INDIVIDUAL COMPANIES, TO AVOID CONFLICTS AND ENSURE PROPER DEPTHS ARE ACHIEVED. THE JURISDICTION UTILITY REQUIREMENTS SHALL ALSO BE MET, AS WELL AS COORDINATING THE UTILITY TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY/SERVICE. WHERE CONFLICTS EXIST WITH THESE SITE PLANS, ENGINEER IS TO BE NOTIFIED PRIOR TO CONSTRUCTION TO RESOLVE.
4. THE CONTRACTOR SHALL PERFORM WHATEVER TEST EXCAVATION OR OTHER INVESTIGATION IS NECESSARY TO VERIFY TIE-IN INVERTS, LOCATIONS AND CLEARANCES, AND SHALL REPORT IMMEDIATELY ANY DISCREPANCIES TO KIMLEY-HORN AND ASSOCIATES, INC. AT (804) 673-3882.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE.
6. MAINTAIN A MINIMUM OF 18" OF VERTICAL CLEARANCE BETWEEN STORM, SANITARY, AND ALL UTILITIES (UNLESS OTHERWISE NOTED).
7. CROSS CONNECTION CONTROL AND BACK FLOW PREVENTION SHALL BE IN ACCORDANCE WITH THE UNIFORM STATEWIDE BUILDING CODE.
8. CONTRACTOR SHALL COORDINATE WITH THE FIRE MARSHAL BEFORE INSTALLING FIRE LANE SIGNS AND MARKINGS.
9. ALL CLEANOUTS WITHIN VEHICULAR AREAS SHALL BE TRAFFIC BARRIERS.
10. CONTRACTOR SHALL SAW CUT, REMOVE, AND REPLACE ASPHALT PAVEMENT AS NECESSARY TO INSTALL UNDERGROUND ELECTRIC, TELEPHONE, SANITARY SEWER, WATER, AND COMMUNICATION CONDUITS.
11. UNDERGROUND UTILITIES INSTALLED ON PRIVATE PROPERTY OR IN PRIVATE UTILITY EASEMENTS AND BUILDING RELATED STORM DRAINS SHALL BE DESIGNED AND INSTALLED PER THE CURRENT EDITION OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
12. PROPOSED CROSSINGS WITH EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
13. THE RIM ELEVATIONS OF EXISTING MANHOLES, INLET STRUCTURES, AND SANITARY CLEANOUT TOPS SHALL BE ADJUSTED, IF REQUIRED, TO MATCH PROPOSED GRADES IN ACCORDANCE WITH ALL APPLICABLE STANDARDS.

1. WHENEVER CONSTRUCTION OPERATIONS ENCROACH ON THE RIGHT-OF WAY OF ADJACENT ROADWAYS TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH LOCAL AND STATE STANDARDS.
2. NO MATERIALS OR EQUIPMENT SHALL BE STORED OR STOCKPILED WITHIN THE RIGHT-OF-WAY OF ADJACENT ROADWAYS.
3. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR COMPLETING AND IMPLEMENTING TRAFFIC CONTROL PLAN.

1. IF REQUIRED FOR THE PROJECT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE FOLLOWING SHOP DRAWINGS: DETENTION SYSTEM, RETAINING WALLS, STORMWATER QUALITY DEVICES.
2. CONTRACTOR TO SUBMIT TO THE COUNTY ALL SHOP DRAWINGS REQUIRED BY THE COUNTY FOR THEIR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

1. CURB RAMPS ALONG PUBLIC STREETS AND IN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED BASED ON THE CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS.
2. PRIVATE CURB RAMPS ON THE SITE (I.E. OUTSIDE PUBLIC STREET RIGHT-OF-WAY) SHALL CONFORM TO ADA STANDARDS AND SHALL HAVE A DETECTABLE WARNING SURFACE THAT IS FULL WIDTH AND FULL DEPTH OF THE CURB RAMP, NOT INCLUDING FLARES.
3. ALL ACCESSIBLE ROUTES, GENERAL SITE AND BUILDING ELEMENTS, RAMPS, CURB RAMPS, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA STANDARDS FOR ACCESSIBLE DESIGN, LATEST EDITION.
4. ANY COMPONENTS OF THE PROJECT SERVING MULTIFAMILY DWELLINGS IN BUILDINGS THAT HAVE 4 OR MORE UNITS PER DWELLING SHALL ALSO CONFORM TO THE FAIR HOUSING ACT (FHA), AND COMPLY WITH THE FAIR HOUSING ACT DESIGN MANUAL BY THE US DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.
5. BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY THAT SUITABLE ACCESSIBLE PEDESTRIAN ROUTES (PER ADA AND FHA) EXIST TO AND FROM EVERY DOOR AND ALONG SIDEWALKS, ACCESSIBLE PARKING SPACES, ACCESS AISLES, AND ACCESSIBLE ROUTES. IN NO CASE SHALL AN ACCESSIBLE RAMP SLOPE EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWALK CROSS SLOPE EXCEED 2.0 PERCENT. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPE EXCEED 5.0 PERCENT. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2.0 PERCENT SLOPE IN ANY DIRECTION.
6. CONTRACTOR SHALL TAKE FIELD SLOPE MEASUREMENTS ON FINISHED SUBGRADE AND FORM BOARDS PRIOR TO PLACING PAVEMENT TO VERIFY THAT ADA SLOPE REQUIREMENTS ARE PROVIDED. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO PAYING IF ANY EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR ADA SLOPE COMPLIANCE ISSUES.



PROJECT HERCULES

APPOMATTOX COUNTY

SHEET NUMBER
CA-103

TITLE NOTES

THIS SURVEY IS PREPARED WITH REFERENCE TO A TITLE COMMITMENT PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT NO. NTS-203366-VA-1 WITH AN EFFECTIVE DATE OF SEPTEMBER 30, 2024. OUR OFFICE HAS REVIEWED THE FOLLOWING SURVEY RELATED EXCEPTIONS IN SCHEDULE B, SECTION II:

⑦ EASEMENT GRANTED TO THE AMERICAN TELEPHONE & TELEGRAPH CO. OF VIRGINIA, DATED APRIL 15, 1899, RECORDED AUGUST 13, 1931 IN DEED BOOK 31, PAGE 143, **MAY AFFECT SUBJECT PROPERTY, VAGUE AND INSUFFICIENT INFORMATION IN THE RECORD DOCUMENT.**

⑧ EASEMENT GRANTED TO THE VIRGINIA PUBLIC SERVICE COMPANY, DATED MARCH 10, 1931, RECORDED DECEMBER 29, 1931 IN DEED BOOK 31, PAGE 285, **MAY AFFECT SUBJECT PROPERTY, VAGUE AND INSUFFICIENT INFORMATION IN THE RECORD DOCUMENT.**

⑨ EASEMENT GRANTED TO THE VIRGINIA PUBLIC SERVICE COMPANY, DATED JUNE 9, 1931, RECORDED NOVEMBER 20, 1931 IN DEED BOOK 31, PAGE 285, **MAY AFFECT SUBJECT PROPERTY, VAGUE AND INSUFFICIENT INFORMATION IN THE RECORD DOCUMENT.**

⑩ EASEMENT GRANTED TO THE VIRGINIA PUBLIC SERVICE COMPANY, DATED JULY 16, 1931, RECORDED DECEMBER 29, 1931 IN DEED BOOK 31, PAGE 341, **MAY AFFECT SUBJECT PROPERTY, VAGUE AND INSUFFICIENT INFORMATION IN THE RECORD DOCUMENT.**

⑪ EASEMENT GRANTED TO THE VIRGINIA PUBLIC SERVICE COMPANY, DATED JULY 16, 1931, RECORDED DECEMBER 29, 1931 IN DEED BOOK 31, PAGE 343, **MAY AFFECT SUBJECT PROPERTY, VAGUE AND INSUFFICIENT INFORMATION IN THE RECORD DOCUMENT.**

⑫ RIGHT OF WAY GRANTED TO THE VIRGINIA PUBLIC SERVICE COMPANY, DATED JULY 21, 1939, RECORDED AUGUST 16, 1939 IN DEED BOOK 38, PAGE 353, **DOES NOT AFFECT THE SUBJECT PROPERTY, EASEMENT LOCATION POINT OF BEGINNING AT ROUTE 613 AND ROUTE 460 INTERSECTION EXTENDING IN A NORTHWARD DIRECTION ALONG THE EAST SIDE OF ROUTE 613 860 FEET.**

⑬ RIGHT OF WAY AGREEMENT GRANTED TO THE TRANSCONTINENTAL GAS PIPE LINE CORPORATION, A DELAWARE CORPORATION, DATED SEPTEMBER 19, 1949, RECORDED OCTOBER 18, 1949 IN DEED BOOK 52, PAGE 157, **AFFECTS THE SUBJECT PROPERTY, SHOWN.**

⑭ EASEMENT GRANTED TO THE VIRGINIA ELECTRIC AND POWER COMPANY, A VIRGINIA CORPORATION, DATED OCTOBER 8, 1949, RECORDED DECEMBER 3, 1949 IN DEED BOOK 52, PAGE 342, **AFFECTS THE SUBJECT PROPERTY, SHOWN.**

⑮ RIGHT OF WAY AGREEMENT GRANTED TO THE TRANSCONTINENTAL GAS PIPE LINE CORPORATION, A DELAWARE CORPORATION, DATED JANUARY 10, 1950, RECORDED MARCH 20, 1950 IN DEED BOOK 53, PAGE 61, **AFFECTS THE SUBJECT PROPERTY, SHOWN.**

⑯ RIGHT OF WAY AGREEMENT GRANTED TO THE TRANSCONTINENTAL GAS PIPE LINE CORPORATION, A DELAWARE CORPORATION, DATED MARCH 15, 1950, RECORDED MAY 22, 1950 IN DEED BOOK 53, PAGE 193, **MAY AFFECT SUBJECT PROPERTY, NOT ENOUGH INFORMATION IN RECORD DOCUMENT TO DETERMINE THE LOCATION OF THE 66 ACRE TRACT OF LAND SITUATED ON THE NORTH SIDE OF THE RAILROAD; PLAT NOT ATTACHED.**

⑰ EASEMENT GRANTED TO THE VIRGINIA ELECTRIC AND POWER COMPANY, A VIRGINIA CORPORATION, DATED JULY 3, 1950, RECORDED SEPTEMBER 14, 1950 IN DEED BOOK 53, PAGE 441, **MAY AFFECT SUBJECT PROPERTY, NOT ENOUGH INFORMATION IN RECORD DOCUMENT TO DETERMINE THE LOCATION OF THE 162 ACRE TRACT OF LAND.**

⑱ EASEMENT GRANTED TO THE VIRGINIA ELECTRIC AND POWER COMPANY, A VIRGINIA CORPORATION, DATED MAY 21, 1951, RECORDED AUGUST 9, 1951 IN DEED BOOK 55, PAGE 400, **DOES NOT AFFECT THE SUBJECT PROPERTY, 16 ACRE TRACT OF LAND ON SOUTH SIDE OF ROUTE 460.**

⑲ EASEMENT GRANTED TO THE VIRGINIA ELECTRIC AND POWER COMPANY, A VIRGINIA CORPORATION, DATED SEPTEMBER 5, 1951, RECORDED OCTOBER 4, 1951 IN DEED BOOK 56, PAGE 118, **MAY AFFECT SUBJECT PROPERTY, NOT ENOUGH INFORMATION IN RECORD DOCUMENT TO DETERMINE THE LOCATION OF THE 150 ACRE TRACT OF LAND.**

⑳ AGREEMENT GRANTED TO THE VIRGINIA ELECTRIC AND POWER COMPANY, DATED AUGUST 26, 1953, RECORDED FEBRUARY 18, 1954 IN DEED BOOK 60, PAGE 80, **MAY AFFECT SUBJECT PROPERTY, NOT ENOUGH INFORMATION IN RECORD DOCUMENT TO DETERMINE THE LOCATION OF THE VEPCO EASEMENT ON THE LANDS FORMERLY OF D.R. CALDWELL.**

㉑ AGREEMENT GRANTED TO THE VIRGINIA ELECTRIC AND POWER COMPANY, DATED MAY 6, 1954, RECORDED JUNE 6, 1954 IN DEED BOOK 60, PAGE 80, **DOES NOT AFFECT THE SUBJECT PROPERTY, EASEMENT ON THE WESTERN SIDE OF ROUTE 613.**

㉒ RIGHT OF WAY GRANTED TO THE TRANSCONTINENTAL GAS PIPE LINE CORPORATION, A DELAWARE CORPORATION, DATED MARCH 5, 1985, RECORDED APRIL 9, 1985 IN DEED BOOK 160 PAGE 703, **AFFECTS THE SUBJECT PROPERTY, SHOWN.**

㉓ DEED OF EASEMENT GRANTED TO THE HISTORY JUNCTION ASSOCIATES, A VIRGINIA GENERAL PARTNERSHIP, DATED AUGUST 15, 1989, RECORDED FEBRUARY 22, 1990 IN DEED BOOK 184, PAGE 612, **AFFECTS THE SUBJECT PROPERTY, SHOWN.**

㉔ RIGHT OF WAY AND EASEMENT AGREEMENT - (VIRGINIA) GRANTED TO THE VVXV OF VIRGINIA, INC., DATED AUGUST 16, 1997, RECORDED SEPTEMBER 15, 1997 IN DEED BOOK 236, PAGE 693, **AFFECTS THE SUBJECT PROPERTY, SHOWN.**

㉕ EASEMENT CONTAINED IN DEED OF EXCHANGE MADE BY AND BETWEEN INDUSTRIAL DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY, A POLITICAL SUBDIVISION OF THE COMMONWEALTH OF VIRGINIA AND NANNIE LUCILLE DOSS, DATED DECEMBER 3, 1999, RECORDED DECEMBER 6, 1999 IN DEED BOOK 258, PAGE 759, **AFFECTS THE SUBJECT PROPERTY, SHOWN.**

㉖ COVENANTS, CONDITIONS, RESTRICTIONS, ETC., AS SET FORTH IN PROTECTIVE COVENANTS, CONDITIONS AND RESTRICTIONS FOR THE APPOMATTOX COUNTY INDUSTRIAL DEVELOPMENT AUTHORITY APPOMATTOX CENTER FOR BUSINESS AND COMMERCE, DATED MAY 28, 2003, RECORDED MAY 30, 2003, AS INSTRUMENT NO. 200301352, **AFFECTS THE SUBJECT PROPERTY, GENERAL IN NATURE, PROTECTIVE COVENANTS, CONDITIONS AND RESTRICTIONS, NOT PLOTTABLE.**

㉗ DEED OF EASEMENT MADE BY AND BETWEEN INDUSTRIAL DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY, A POLITICAL SUBDIVISION OF THE COMMONWEALTH OF VIRGINIA AND H. CURTIS PEARSON, JR., DAVID T. PERKINS AND KATIE W. PEARSON, EXECUTOR OF THE ESTATE AND UNDER THE WILL AND CODICIL OF HARRY C. PEARSON, DECEASED, DATED NOVEMBER 10, 2003, RECORDED DECEMBER 17, 2003, AS INSTRUMENT NO. 200303425, **AFFECTS THE SUBJECT PROPERTY, EASEMENT LOCATION CAN NOT BE DETERMINED, REFERENCE PLATS PLAT BOOK 8 PAGE 39 AND PLAT CABINET I SLIDE 87-C NOT ATTACHED TO RECORD DOCUMENT, NOT PLOTTABLE.**

㉘ SUBDIVISION EASEMENT AGREEMENT GRANTED TO THE CENTRAL VIRGINIA ELECTRIC COOPERATIVE, A VIRGINIA CORPORATION, DATED NOVEMBER 25, 2003, RECORDED SEPTEMBER 15, 2004 AS INSTRUMENT NO. 200402296, **AFFECTS THE SUBJECT PROPERTY, SHOWN.**

㉙ EASEMENT AGREEMENT GRANTED TO THE CENTRAL VIRGINIA ELECTRIC COOPERATIVE, A VIRGINIA CORPORATION, DATED FEBRUARY 10, 2004, RECORDED SEPTEMBER 15, 2004 AS INSTRUMENT NO. 200402297, **AFFECTS THE SUBJECT PROPERTY, SHOWN.**

㉚ UNDERGROUND EASEMENT AGREEMENT GRANTED TO THE CENTRAL VIRGINIA ELECTRIC COOPERATIVE, A VIRGINIA CORPORATION, DATED MAY 22, 2006, RECORDED NOVEMBER 16, 2006 AS INSTRUMENT NO. 200602805, **AFFECTS THE SUBJECT PROPERTY, SHOWN.**

㉛ EASEMENT GRANTED TO THE COMMONWEALTH OF VIRGINIA, DATED JUNE 11, 2007, RECORDED AUGUST 8, 2007, AS INSTRUMENT NO. 200702086, **AFFECTS THE SUBJECT PROPERTY, SHOWN.**

㉜ UNDERGROUND EASEMENT AGREEMENT GRANTED TO THE CENTRAL VIRGINIA ELECTRIC COOPERATIVE, A VIRGINIA CORPORATION, DATED APRIL 8, 2009, RECORDED AUGUST 3, 2009 AS INSTRUMENT NO. 200901603, **AFFECTS THE SUBJECT PROPERTY, SHOWN.**

㉝ UNDERGROUND EASEMENT AGREEMENT GRANTED TO THE CENTRAL VIRGINIA ELECTRIC COOPERATIVE, A VIRGINIA CORPORATION, DATED AUGUST 24, 2010 RECORDED NOVEMBER 5, 2010 AS INSTRUMENT NO. 201001875, **DOES NOT AFFECT THE SUBJECT PARCEL, EASEMENT LOCATION NORTH WEST IN PARCEL 63-A-81.**

㉞ DEED OF EASEMENT GRANTED TO THE COUNTY OF APPOMATTOX, VIRGINIA, DATED APRIL 19, 2010 RECORDED FEBRUARY 14, 2013 AS INSTRUMENT NO. 201300273 AND AS AMENDED BY AMENDED DEED OF EASEMENT, RECORDED AS INSTRUMENT NO. 201300274, **AFFECTS THE SUBJECT PROPERTY, SHOWN.**

㉟ RIGHT OF WAY AGREEMENT GRANTED TO THE VIRGINIA ELECTRIC AND POWER COMPANY, A VIRGINIA PUBLIC SERVICE CORPORATION, DATED AS OF JUNE 29, 2015, RECORDED JULY 17, 2015 AS INSTRUMENT NO. 201501019, **AFFECTS THE SUBJECT PROPERTY, SHOWN.**

㊱ TERMS AND CONDITIONS OF MEMORANDUM OF OPTION AGREEMENT FOR PURCHASE OF REAL PROPERTY AND PURCHASE AGREEMENT MADE BY AND BETWEEN APPOMATTOX COUNTY ECONOMIC DEVELOPMENT AUTHORITY AND ADP APPOMATTOX DATA HUB, LLC, A DELAWARE LIMITED LIABILITY COMPANY, DATED AS OF APRIL 19, 2024, RECORDED MAY 17, 2024 AS INSTRUMENT NO. 202400771, **AFFECTS THE SUBJECT PROPERTY, GENERAL IN NATURE, AGREEMENT, NOT PLOTTABLE.**

㊲ MATTERS AS SHOWN ON PLAT RECORDED IN PLAT CABINET I SLIDE 10, **AFFECTS THE SUBJECT PROPERTY, SHOWN.**

㊳ MATTERS AS SHOWN ON PLAT RECORDED IN PLAT CABINET 1 SLIDE 18E, **AFFECTS THE SUBJECT PROPERTY, NOT PLOTTABLE EASEMENTS.**

㊴ RIGHTS OF UPPER AND LOWER RIPARIAN OWNERS IN AND TO THE UNINTERRUPTED FLOW OF THE CREEK OR STREAM RUNNING THROUGH OR ADJACENT TO THE LAND, **AFFECTS THE SUBJECT PROPERTY, GENERAL IN NATURE, NOT PLOTTABLE.**

㊵ ROLLBACK TAXES OR CHANGE IN USE TAXES, **NOT SURVEY RELATED.**

ZONING:

M-IP (PLANNED INDUSTRIAL DISTRICT)

MINIMUM SETBACK REQUIREMENTS

- FRONT YARD
A. PRINCIPAL STRUCTURE: 30 FEET OR 20 FEET WHEN ALL PARKING IS BEHIND THE FRONT BUILDING LINE
B. ACCESSORY STRUCTURE: BEHIND THE FRONT BUILDING LINE
- SIDE YARD
A. PRINCIPAL STRUCTURE: 10 FEET
B. ACCESSORY STRUCTURE: 3 FEET
- REAR YARD
A. PRINCIPAL STRUCTURE: 10 FEET
B. ACCESSORY STRUCTURE: 3 FEET
- WHERE A LOT FRONTS ON MORE THAN ONE STREET, FRONT YARD SETBACKS SHALL APPLY TO ALL STREETS.
- A. MAXIMUM HEIGHT OF STRUCTURES
5. ALL STRUCTURES: 45 FEET. STRUCTURES MAY EXCEED THE HEIGHT LIMITATION PROVIDED A CONDITION⁶⁹ USE PERMIT IS APPROVED IN ACCORDANCE WITH THIS ORDINANCE.

SPECIAL REGULATIONS

- THE FOLLOWING REGULATIONS SHALL APPLY IN IP DISTRICTS:
A. REQUIRED SETBACK AREAS AND OTHER OPEN AREAS NOT NEEDED FOR OPERATIONS SHALL BE LANDSCAPED AND SUCH LANDSCAPING SHALL BE MAINTAINED AT ALL TIMES.
B. THE FOLLOWING BUTTER AREAS SHALL BE REQUIRED:
I. A MINIMUM OF 75 FEET FROM ANY ADJOINING AGRICULTURAL, RESIDENTIAL, VILLAGE CENTER OR HISTORIC OVERLAY DISTRICT.
II. A MINIMUM OF 20 FEET FROM ANY ADJOINING COMMERCIAL OR INDUSTRIAL DISTRICT.

ENCROACHMENT TABLE

A) FENCE ENCLOSES 11.1' ± AT ITS GREATEST POINT

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF APPOMATTOX, STATE OF VIRGINIA AND IS DESCRIBED AS FOLLOWS:

ALL THAT CERTAIN LOT, PIECE, OR PARCEL OF REAL ESTATE, LYING AND BEING IN THE SOUTHSIDE DISTRICT OF APPOMATTOX COUNTY, VIRGINIA, FRONTING ON S.R. 613 (COMMONLY KNOWN AS "POLICE TOWER ROAD"), S.R. 26, AND HAVING ACCESS TO HWY. 460, CONSISTING OF 574.33 ACRES BY THE PLAT OF SURVEY MADE BY WILLIAM W. DICKERSON, JR., DATED MAY 26, 1998, WHICH PLAT IS RECORDED IN PLAT CABINET 1 SLIDE 18E, AND INCORPORATED HEREIN BY REFERENCE FOR A MORE PARTICULAR DESCRIPTION OF THE PROPERTY TO BE CONVEYED.

LESS AND EXCEPT THAT PORTION OF PROPERTY CONTAINING 0.21 ACRES, CONVEYED TO PAYTON G. CUMBY AND JEAN M. CUMBY, HUSBAND AND WIFE, BY DEED OF BARGAIN AND SALE FROM INDUSTRIAL DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY, VIRGINIA, DATED OCTOBER 21, 1999 RECORDED NOVEMBER 15, 1999, IN DEED BOOK 258 PAGE 301.

LESS AND EXCEPT THAT PORTION OF PROPERTY CONTAINING 1.151 ACRES, CONVEYED TO COMMONWEALTH OF VIRGINIA, BY DEED OF BARGAIN AND SALE FROM INDUSTRIAL DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY, A POLITICAL SUBDIVISION OF THE COMMONWEALTH OF VIRGINIA, DATED APRIL 6, 2000 RECORDED APRIL 7, 2000, IN DEED BOOK 281 PAGE 696.

LESS AND EXCEPT THAT PORTION OF PROPERTY CONTAINING 5.43 ACRES, CONVEYED TO REVELY E. MARTIN AND TAMARA S. MARTIN, HUSBAND AND WIFE, BY DEED OF BARGAIN AND SALE FROM THE INDUSTRIAL DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY, A POLITICAL SUBDIVISION OF THE COMMONWEALTH OF VIRGINIA, DATED JULY 11, 2003, RECORDED JULY 14, 2003, AS INSTRUMENT NO. 200301818.

LESS AND EXCEPT THAT PORTION OF PROPERTY CONTAINING 12.58 ACRES, CONVEYED TO ROB OF LYNCHBURG, LLC, A VIRGINIA LIMITED LIABILITY COMPANY, BY DEED OF BARGAIN AND SALE FROM THE INDUSTRIAL DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY, A POLITICAL SUBDIVISION OF THE COMMONWEALTH OF VIRGINIA, DATED OCTOBER 9, 2005, RECORDED OCTOBER 11, 2005, AS INSTRUMENT NO. 200502481, AS SHOWN ON PLAT RECORDED IN PLAT CABINET 1 SLIDE 110G.

LESS AND EXCEPT THAT PORTION OF PROPERTY CONTAINING 0.03 ACRES, CONVEYED TO TSM PROPERTIES, LLC, A VIRGINIA LIMITED LIABILITY COMPANY, BY DEED OF GIFT FROM THE INDUSTRIAL DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY, VIRGINIA, A POLITICAL SUBDIVISION OF THE COMMONWEALTH OF VIRGINIA, DATED AUGUST 19, 2006, RECORDED OCTOBER 12, 2006, AS INSTRUMENT NO. 200602483.

LESS AND EXCEPT THAT PORTION OF PROPERTY CONTAINING 2.00 ACRES, CONVEYED TO PENELOPE HOLDINGS, LLC, BY DEED OF BARGAIN AND SALE FROM THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (FORMERLY KNOWN AS THE INDUSTRIAL DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY, VIRGINIA), A POLITICAL SUBDIVISION OF THE COMMONWEALTH OF VIRGINIA, DATED SEPTEMBER 25, 2009, RECORDED OCTOBER 6, 2009, AS INSTRUMENT NO. 200902103, AS SHOWN ON PLAT RECORDED IN PLAT CABINET 1 SLIDE 158F.

LESS AND EXCEPT THAT PORTION OF PROPERTY CONTAINING 2.00 ACRES, CONVEYED TO DELTA RESPONSE TEAM, LLC, BY DEED FROM THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY, FORMERLY INDUSTRIAL DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY, DATED MAY 9, 2016, RECORDED MAY 9, 2016, AS INSTRUMENT NO. 201600665, AS SHOWN ON PLAT RECORDED IN PLAT CABINET 2 SLIDE 109C.

LESS AND EXCEPT THAT PORTION OF PROPERTY CONTAINING 100.02 ACRES, CONVEYED TO APPOMATTOX COUNTY, VIRGINIA, A POLITICAL SUBDIVISION OF THE COMMONWEALTH OF VIRGINIA, BY DEED FROM THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY, VIRGINIA, A POLITICAL SUBDIVISION OF THE COMMONWEALTH OF VIRGINIA, DATED MARCH 28, 2022, RECORDED JUNE 9, 2022, AS INSTRUMENT NO. 202201257, AS SHOWN ON PLAT RECORDED IN PLAT CABINET 2 SLIDE 163F.

AND BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS, BASED UPON A CURRENT FIELD SURVEY, REFERENCED TO THE VIRGINIA COORDINATE SYSTEM OF 1983, SOUTH ZONE:

BEGINNING AT AN IRON PIPE SET MARKING THE POINT OF INTERSECTION OF THE SOUTHERLY RIGHT-OF-WAY LIMITS OF OAKVILLE ROAD, VA RTE. 26 WITH THE SOUTHERLY RIGHT-OF-WAY LIMITS OF INDUSTRIAL PARK LANE, VA RTE. 751, THENCE WITH SAID SOUTHERLY RIGHT-OF-WAY LIMITS OF OAKVILLE ROAD, VA RTE. 26:

S 35°02'59" E, PASSING A REBAR FOUND AT 12.74 FEET, 238.87 FEET TO A REBAR FOUND MARKING THE POINT OF INTERSECTION OF SAID SOUTHERLY RIGHT-OF-WAY LIMITS WITH THE DIVISION LINE BETWEEN THE LANDS OF K.A. VIERS & L.A. MASON-VIERS (INSTRUMENT NO. 202401591), ON THE EAST AND THE LANDS OF ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE WEST, THENCE WITH SAID DIVISION LINE :

S 49°28'21" W, 125.48 FEET TO A REBAR FOUND, THENCE CONTINUING WITH SAID DIVISION LINE AND WITH THE DIVISION LINE BETWEEN THE LANDS OF JULIA B. SMYSER (INSTRUMENT NO. 202200950 AND INSTRUMENT NO. 202200921), ON THE NORTH AND SAID LANDS OF THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE WEST, THENCE WITH SAID DIVISION LINE.

S 29°23'16" E, 383.80 FEET TO A REBAR FOUND THENCE CONTINUING WITH THE LAST- MENTIONED DIVISION LINE:

S 34°21'13" W, 212.08 FEET TO FEET TO REBAR FOUND MARKING THE WESTERLY RIGHT-OF-WAY LIMITS OF MCKENNA FRAH ROAD, VA RTE. 1029, THENCE WITH SAID WESTERLY RIGHT-OF-WAY LIMITS:

S 29°10'19" W, 41.48 FEET TO A REBAR FOUND MARKING THE MARKING THE POINT OF INTERSECTION OF SAID WESTERLY RIGHT-OF-WAY LIMITS WITH THE DIVISION LINE BETWEEN THE LANDS OF TAMMY M. CUMBY, ET AL'S (WILL INSTRUMENT NO. 201800585), ON THE EAST AND SAID LANDS OF THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE WEST, THENCE WITH SAID DIVISION LINE.

S 29°24'34" W, 83.42 FEET TO A REBAR FOUND MARKING THE POINT OF INTERSECTION OF SAID DIVISION LINE WITH THE DIVISION LINE BETWEEN THE LANDS OF ALFRED K. MOORE (INSTRUMENT NO. 20151041), ON THE SOUTH AND SAID LANDS OF THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE NORTH, THENCE WITH SAID DIVISION LINE, THE FOLLOWING TWO (2) COURSES AND DISTANCES:

N 59°31'06" W, 230.67 FEET TO A REBAR FOUND, THENCE CONTINUING:

S 20°41'14" W, 149.88 FEET TO A REBAR FOUND MARKING THE POINT OF INTERSECTION OF SAID DIVISION LINE WITH THE DIVISION LINE BETWEEN THE LANDS OF ADAM MOORE (INSTRUMENT NO. 201500809 & INSTRUMENT NO. 201401750), ON THE SOUTH AND SAID LANDS OF THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE NORTH, THENCE WITH SAID DIVISION LINE, THE FOLLOWING SIX (6) COURSES AND DISTANCES:

N 58°08'37" W, 142.18 FEET TO AN IRON PIPE FOUND, THENCE CONTINUING:

S 38°56'10" W, 587.11 FEET TO A REBAR FOUND, THENCE CONTINUING:

S 72°59'22" W, 266.43 FEET TO A REBAR FOUND, THENCE CONTINUING:

S 74°22'45" W, 454.33 FEET TO A 36 INCH OAK TREE, THENCE CONTINUING:

S 14°48'12" E, 1122.73 FEET TO A REBAR FOUND, THENCE CONTINUING:

S 48°21'23" E, 350.88 FEET TO A REBAR FOUND MARKING THE POINT OF INTERSECTION OF SAID DIVISION LINE WITH THE DIVISION LINE BETWEEN THE LANDS OF FREEDOM RIDGE LLC (20042165), ON THE EAST AND SAID LANDS OF ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE WEST, THENCE WITH SAID DIVISION LINE, THE FOLLOWING THREE (3) COURSES AND DISTANCES:

S 50°16'29" W, 700.36 FEET TO A REBAR FOUND, THENCE CONTINUING:

S 31°12'49" E, 542.13 FEET TO A REBAR FOUND, THENCE CONTINUING:

N 73°44'49" E, 20.70 FEET TO A REBAR FOUND MARKING THE POINT OF INTERSECTION OF SAID DIVISION LINE WITH THE DIVISION LINE BETWEEN THE LANDS OF THE ROSEMYR CORPORATION (INSTRUMENT NO. 20161678), ON THE NORTH AND THE SAID LANDS OF ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE WEST, THENCE WITH SAID DIVISION LINE AND CONTINUING WITH THE DIVISION LINE BETWEEN THE LANDS OF A&S CARROLLTON HOTEL LLC (INSTRUMENT NO. 20081827), ON THE NORTH AND SAID LANDS OF ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE SOUTH:

S 31°12'41" E, 851.91 FEET TO A MAG NAIL FOUND IN THE NORTHERLY RIGHT-OF-WAY LIMITS OF RICHMOND HIGHWAY, U.S. RTE. 460, THENCE WITH SAID NORTHERLY RIGHT-OF-WAY LIMITS:

S 73°44'49" W, 58.48 FEET TO A REBAR FOUND MARKING THE POINT OF INTERSECTION OF SAID RIGHT-OF-WAY LIMITS WITH THE DIVISION LINE BETWEEN THE LANDS OF THE SCRUOGS & SCRUOGS LLC (INSTRUMENT NO. 2014372), ON THE SOUTH AND THE SAID LANDS OF ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE NORTH, THENCE WITH SAID DIVISION LINE AND CONTINUING WITH THE NORTHERLY BOUNDARY OF THE LANDS OF THE SHELIA M. ROYER REVOCABLE TRUST (INSTRUMENT NO. 20202039) AND THE NORTHERLY BOUNDARY OF THE LANDS OF CLAYTON C. BRYANT, JR. (INSTRUMENT NO. 20202039):

N 20°02'41" W, 32.20 FEET TO A POINT, THENCE CONTINUING:

N 31°12'41" W, 1238.18 FEET TO AN IRON PIPE FOUND MARKING THE POINT OF INTERSECTION OF SAID DIVISION LINE WITH THE DIVISION LINE BETWEEN THE LANDS OF CLAYTON C. BRYANT, JR. (INSTRUMENT NO. 20202039), ON THE EAST AND SAID LANDS OF ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE WEST, THENCE WITH SAID DIVISION LINE, THE FOLLOWING SIX (6) COURSES AND DISTANCES:

S 84°07'19" W, 88.04 FEE TO A POINT LYING S 231°03'59" W, 2.38 FEET FROM AN IRON PIPE FOUND, THENCE CONTINUING: ²⁶⁷

S 51°08'29" W, 92.58 FEET TO A POINT, THENCE CONTINUING:

N 26°41'31" W, PASSING A REBAR FOUND AT 5.25 FEET, 40.00 FEET TO A REBAR FOUND, THENCE CONTINUING:

S 42°50'45" W, 213.14 FEET TO A REBAR FOUND, THENCE CONTINUING:

S 88°35'19" W, 217.44 FEET TO A POINT, THENCE CONTINUING:

S 22°52'51" E, PASSING A REBAR FOUND AT 19.92 FEET, 238.80 FEET TO A REBAR FOUND MARKING THE POINT OF INTERSECTION OF SAID DIVISION LINE WITH THE DIVISION LINE BETWEEN THE LANDS OF MOORE-WOLFS LLC (INSTRUMENT NO. 20170202), ON THE SOUTH AND SAID LANDS OF THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE NORTH, THENCE WITH SAID DIVISION LINE:

S 82°23'49" W, 266.40 FEET TO AN IRON PIPE SET, THENCE CONTINUING WITH SAID DIVISION LINE AND WITH THE DIVISION LINE BETWEEN THE LANDS OF RYAN B. FISCHER (INSTRUMENT NO. 20211295), ON THE SOUTH AND SAID LANDS OF THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE NORTH:

N 74°24'01" W, 572.77 FEET TO AN IRON PIPE SET, THENCE CONTINUING WITH SAID DIVISION LINE AND CONTINUING WITH THE DIVISION LINE BETWEEN THE LANDS OF ROBERT VAUGHN REVOCABLE FAMILY TRUST & TERESA A. VAUGH (DEED BOOK 233 PAGE 768), ON THE SOUTH AND SAID LANDS OF THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE NORTH:

N 79°25'51" W, 170.99 FEET TO A 36 IN. DEAD TREE WITH A NAIL MARKING THE POINT OF INTERSECTION OF SAID DIVISION LINE, WITH THE DIVISION LINE BETWEEN THE LANDS OF ROBERT F. WALTON (DEED BOOK 833 PAGE 243),

ON THE WEST AND SAID LANDS OF THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE EAST, THENCE WITH SAID DIVISION LINE, THE FOLLOWING SEVEN (7) COURSES AND DISTANCES:

N 11°25'49" E, 231.71 FEET TO AN IRON PIPE SET, THENCE CONTINUING:

N 84°48'01" W, 204.38 FEET TO AN IRON PIPE SET, THENCE CONTINUING:

S 72°12'09" W, 158.16 FEET TO AN IRON PIPE SET, THENCE CONTINUING:

N 86°36'31" W, 287.55 FEET TO AN IRON PIPE SET, THENCE CONTINUING:

S 21°33'39" W, 110.71 FEET TO A REBAR FOUND, THENCE CONTINUING:

S 01°54'49" W, 279.22 FEET TO A REBAR FOUND MARKING THE POINT OF INTERSECTION OF SAID DIVISION LINE WITH THE DIVISION LINE BETWEEN THE LANDS OF ROBERT H. MARTIN, SR. (WILL BOOK 2006 PAGE 74), ON THE SOUTH AND SAID LANDS OF THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE NORTH, THENCE WITH SAID DIVISION LINE:

S 74°46'19" W, 105.75 FEET TO AN IRON PIPE SET MARKING THE POINT OF INTERSECTION OF SAID DIVISION LINE WITH THE DIVISION LINE BETWEEN THE LANDS OF COURTLAND REALTY ASSOCIATES (INSTRUMENT NO. 200802504), ON THE SOUTH AND SAID LANDS OF THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE NORTH, THENCE WITH SAID DIVISION LINE AND CONTINUING WITH THE DIVISION LINE BETWEEN THE LANDS OF JOSHUA N. SPICER (INSTRUMENT NO. 20231751), ON THE SOUTH AND SAID LANDS OF THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE NORTH:

N 50°18'01" W, 312.98 FEET TO AN IRON PIPE SET THENCE CONTINUING WITH THE LAST-MENTIONED DIVISION LINE AND WITH THE DIVISION LINE BETWEEN THE LANDS OF COURTLAND REALTY ASSOCIATES (INSTRUMENT NO. 20081443), ON THE SOUTH AND SAID LANDS OF THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE NORTH:

N 39°46'41" W, 300.17 TO AN IRON PIPE SET THENCE CONTINUING WITH THE LAST-MENTIONED DIVISION LINE, THE FOLLOWING THREE (3) COURSES AND DISTANCES:

N 36°11'41" W, 108.46 FEET TO AN IRON PIPE SET, THENCE CONTINUING:

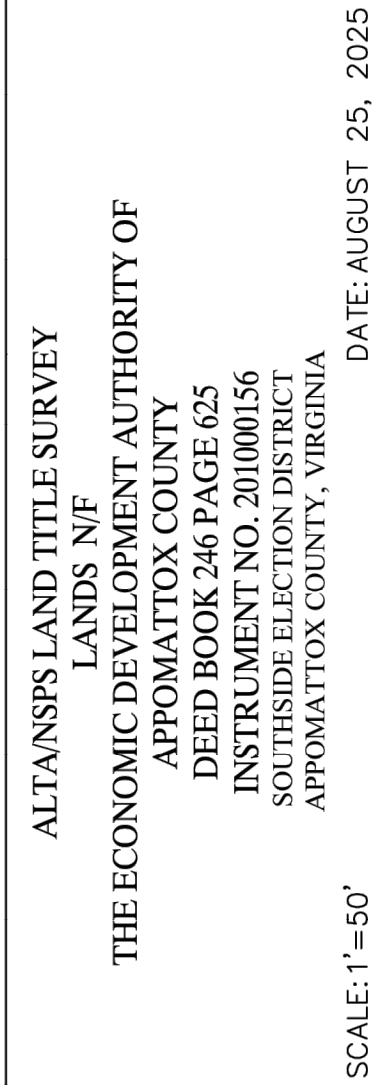
N 23°42'41" W, 297.85 FEET TO AN IRON PIPE SET THENCE CONTINUING:

N 21°07'41" W, 254.47 FEET TO A 1 IN. PIPE WITH A NAIL MARKING THE POINT OF INTERSECTION OF SAID DIVISION LINE WITH THE DIVISION LINE BETWEEN THE LANDS OF DAVID S. BULLOCK & JESSICA D. BULLOCK (INSTRUMENT NO. 2010585), ON THE SOUTH AND SAID LANDS OF THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE NORTH, THENCE WITH SAID DIVISION LINE AND WITH THE DIVISION LINE BETWEEN THE LANDS OF DAVID C. SMATHERS & KAILYN N. MARTIN (INSTRUMENT NO. 20221332), ON THE SOUTH AND SAID LANDS OF THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE NORTH:

N 81°54'31" W, PASSING A REBAR FOUND AT 790.50 FEET, 1504.89 FEET TO A REBAR FOUND, THENCE CONTINUING WITH THE LAST-MENTIONED DIVISION LINE AND WITH THE DIVISION LINE BETWEEN THE LANDS OF MATTHEW B & KARY A. FOSTERS (INSTRUMENT NO. 2017187), ON THE EAST AND SAID LANDS OF THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE WEST:

S 03°45'51" E, 635.49 FEET TO A REBAR FOUND MARKING THE POINT OF INTERSECTION OF SAID DIVISION LINE WITH THE DIVISION LINE BETWEEN THE LANDS OF KENNETH L. & JANICE M. MARSTON (INSTRUMENT NO. 20061582), ON THE SOUTH AND SAID LANDS OF THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE NORTH, THENCE WITH SAID DIVISION LINE AND WITH THE DIVISION LINE BETWEEN OTHER LANDS OF KENNETH L. & JANICE M. MARSTON (INSTRUMENT NO. 20042324), ON THE SOUTH AND SAID LANDS OF THE ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY (DEED BOOK 246 PAGE 625), ON THE NORTH:

S 88°32'34" E, 816.21



CHK. G.R.S.	REVISION	DATE:	BY
	REVISED BOUNDARY	10/28/24	JJK
	REVISED BOUNDARY	08/25/23	JJK
DES:			
DWN: JJK	250 0 250 500		

SCALE: 1" = 250'

SCALE: 1" = 50'

DATE: AUGUST 25 2025

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FAX: 703-763-2320
email: grsgroup.llc@gmail.com

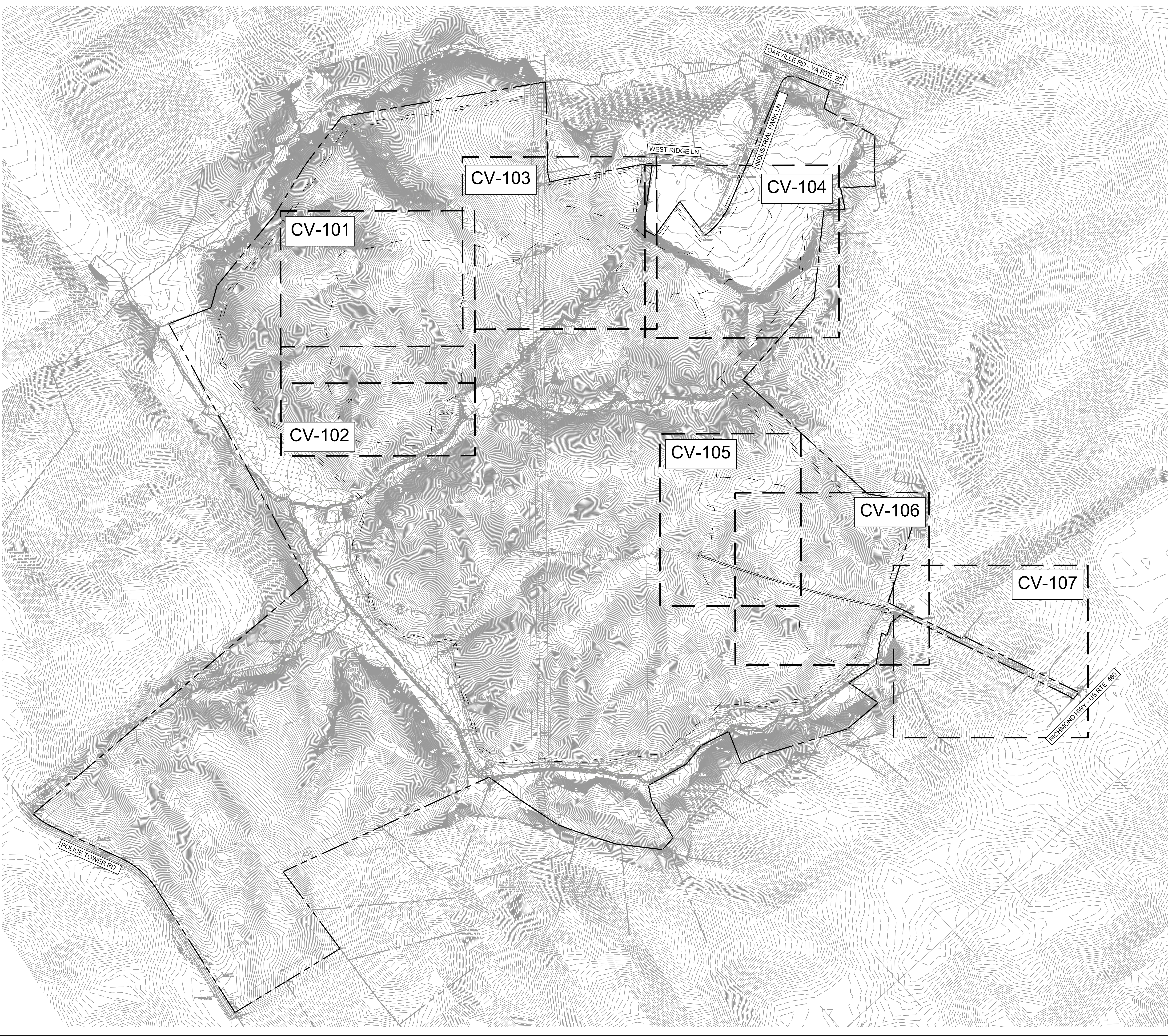
KH PROJECT NO
113706001

SHEET 3 OF 3

CX-103 ALTANSPS I AND TITLE SURVEY

- | | | | |
|---|--|---|----------------------|
|  | TOP OF CURB ELEVATION |  | TREE W SIZE |
|  | FLOWLINE ELEVATION |  | STORM INLET RISER |
|  | EDGE OF PAVEMENT ELEVATION |  | WATER METER |
|  | SPOT ELEVATION |  | WATER VALVE |
|  | EXISTING CONTOUR |  | FIRE HYDRANT |
|  | PROPERTY LINE |  | SANITARY MANHOLE |
|  | ADJOINING PROPERTY LINE |  | CLEAN OUT |
|  | BUILDING W/ HATCH |  | GRATE INLET |
|  | APPROX. LOC. OVERHEAD WIRES |  | UTILITY POLE |
|  | APPROX. LOC. UNDERGROUND NATURAL GAS SERVICE |  | GUY WIRE |
|  | APPROX. LOC. UNDERGROUND FIBER OPTIC |  | PEDESTAL |
|  | APPROX. LOC. UNDERGROUND NATURAL ELECTRIC |  | UTILITY COVER |
|  | CHAIN LINK FENCE |  | ELECTRIC METER |
|  | WOOD OR VINYL FENCE |  | TRANSFORMER |
|  | APPROX. LOC. STREAM CENTER |  | MAIL BOX |
|  | TREELINE |  | SIGN |
|  | CONCRETE |  | BOLLARD |
|  | RIP RAP |  | SURVEY CONTROL POINT |
| | |  | PAINTED ARROW |
| | |  | TITLE EXCEPTION |
| | |  | REBAR FOUND/SET |
| | |  | IRON PIPE FOUND/SET |

Plotted By:McGray, Stephen Sheet Set:Kha Layout:CV-100 OVERALL EXISTING CONDITIONS & DEMOLITION PLAN November 05, 2025 04:11:52pm
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EXISTING CONDITIONS LEGEND

× TC 262.83	TOP OF CURB ELEVATION
× G 262.83	FLOWLINE ELEVATION
× EP 262.83	EDGE OF PAVEMENT ELEVATION
× 262.83	SPOT ELEVATION
— 262 —	EXISTING CONTOUR
---	APPROX. LOC. UNDERGROUND ELECTRIC
· · · · ·	APPROX. LOC. UNDERGROUND WATER
---	APPROX. LOC. ATION UNDERGROUND TELEPHONE
---	APPROX. LOC. UNDERGROUND GAS
---	APPROX. LOC. SEWER LINE
· · · · ·	OVERHEAD WIRES
---	METAL OR WOOD FENCE
---	CHAIN LINK FENCE
---	WIRE FENCE
WV	WATER VALVE
WM	WATER METER
WMH	WATER MANHOLE
FH	FIRE HYDRANT
GV	GAS VALVE
GM	GAS METER
UP	UTILITY POLE
GW	GUY WIRE
EM	ELECTRIC METER
EB	ELECTRIC BOX
TP	TELEPHONE PEDESTAL
TF	TRANSFORMER
S	SIGN
B	BOLLARD
WETLANDS	WETLANDS
TREE (W/SIZE)	TREE (W/SIZE)
BUSH	BUSH
TREE LINE	TREE LINE
GRATE INLET	GRATE INLET
STORM MANHOLE	STORM MANHOLE
SANITARY MANHOLE	SANITARY MANHOLE
TELEPHONE MANHOLE	TELEPHONE MANHOLE
ELECTRIC MANHOLE	ELECTRIC MANHOLE
CLEAN OUT	CLEAN OUT
ROOF DRAIN	ROOF DRAIN
DENOTES PARKING COUNT	DENOTES PARKING COUNT
TITLE EXCEPTION	TITLE EXCEPTION
BENCHMARK	BENCHMARK
PAINTED ARROWS	PAINTED ARROWS
WHEEL STOP	WHEEL STOP
HANDICAP PARKING	HANDICAP PARKING
MONITORING WELL	MONITORING WELL
U BOLLARD	U BOLLARD
STOP BAR	STOP BAR
SOIL BORING	SOIL BORING
20' BELL	20' BELL
CENTERLINE	CENTERLINE
EASEMENT LINE	EASEMENT LINE
MAJOR CONTOUR	MAJOR CONTOUR
MINOR CONTOUR	MINOR CONTOUR
BUILDING WITH HATCH	BUILDING WITH HATCH
PROPERTY LINE	PROPERTY LINE
ADJACENT PROPERTY LINE	ADJACENT PROPERTY LINE

DEMOLITION LEGEND

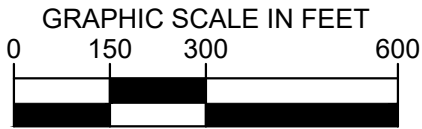
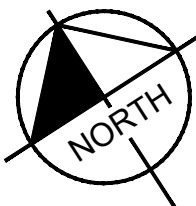
---	LIMITS OF DISTURBANCE
⊗	TREE TO BE REMOVED
· · · · ·	EXISTING UTILITIES TO BE REMOVED OR RELOCATED
---	ASPHALT SAWCUT LINE
-X-X-X-	EXISTING CURB TO BE REMOVED
---	EXISTING VEGETATION TO BE CLEARED AND GRUBBED
---	EXISTING ACCESS ROAD OR ASPHALT/GRAVEL TO BE REMOVED

DEMOLITION NOTES

- THIS EXISTING CONDITION/DEMOLITION PLAN IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION AND FOR THE DEMOLITION, REMOVAL, OR RELOCATION OF ITEMS IN CONFLICT WITH THE PROPOSED CONSTRUCTION.

SURVEY NOTES

- FIELD SURVEY PREPARED BY GRS GROUP, LLC SEPTEMBER 3, 2024 THROUGH SEPTEMBER 21, 2024
- WETLAND DELINEATION BY KIMLEY-HORN, MAY 13, 2025



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6806 PARAGON PLACE, SUITE 310, RICHMOND, VA 23230
PHONE: 804-673-8882
WWW.KIMLEY-HORN.COM

KHA PROJECT	113706001	DATE	11/14/2025	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
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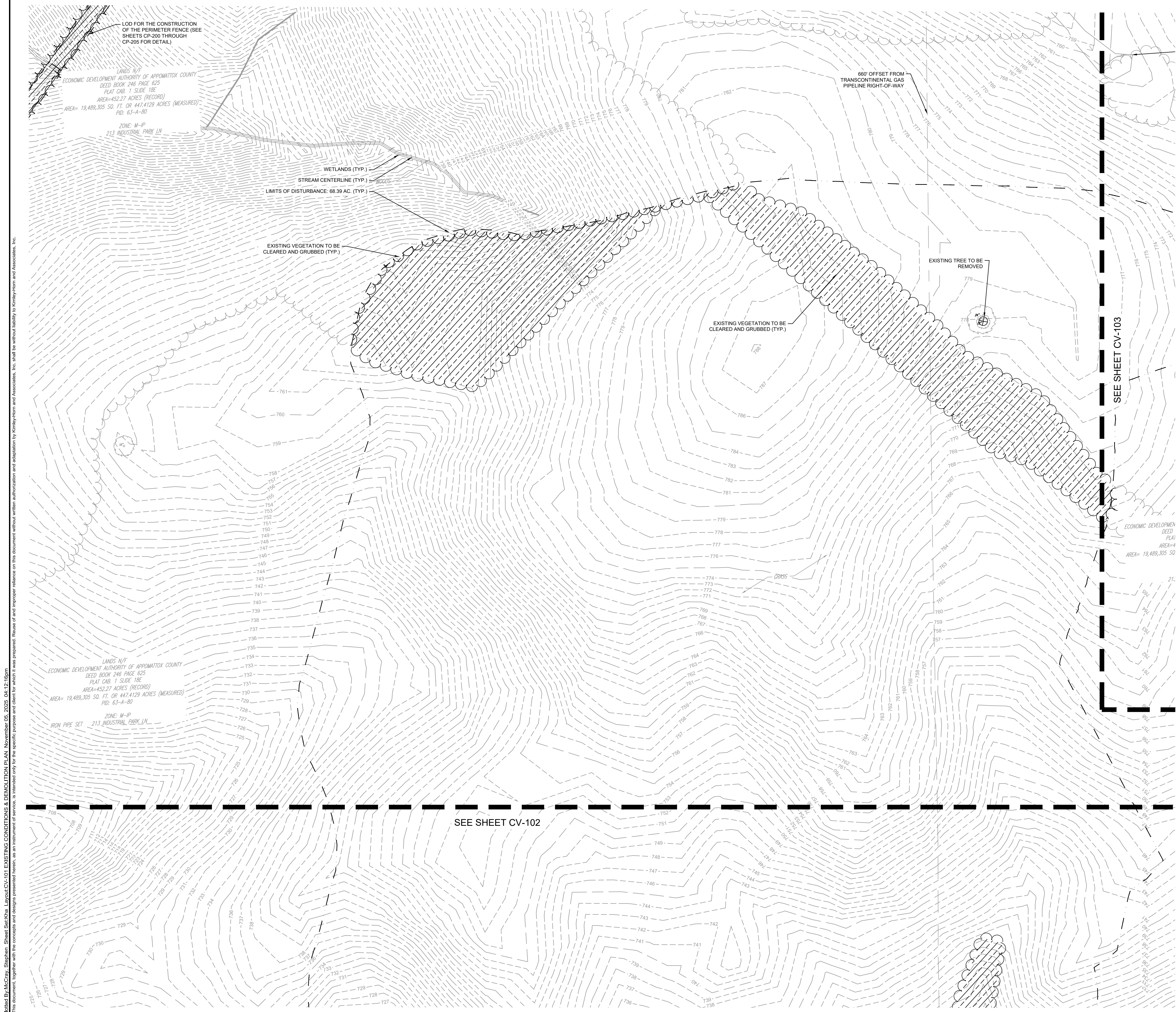
OVERALL EXISTING CONDITIONS & DEMOLITION PLAN

PROJECT HERCULES

APPOMATTOX COUNTY

SHEET NUMBER

CV-100



EXISTING CONDITIONS LEGEND

- × TC 262.83 TOP OF CURB ELEVATION
- × G 262.83 FLOWLINE ELEVATION
- × EP 262.83 EDGE OF PAVEMENT ELEVATION
- × 262.83 SPOT ELEVATION
- 262 — EXISTING CONTOUR
- — — — — APPROX. LOC. UNDERGROUND ELECTRIC
- · · · · APPROX. LOC. UNDERGROUND WATER
- FD — APPROX. LOC. ACTION UNDERGROUND TELEPHONE
- GAS — APPROX. LOC. UNDERGROUND GAS
- — — — — APPROX. LOC. SEWER LINE
- · · · · OVERHEAD WIRES
- — — — — METAL OR WOOD FENCE
- — — — — CHAIN LINK FENCE
- — — — — WIRE FENCE
- WATER VALVE
- WATER METER
- WATER MANHOLE
- FIRE HYDRANT
- GAS VALVE
- GAS METER
- UTILITY POLE
- GUY WIRE
- ELECTRIC METER
- ELECTRIC BOX
- TELEPHONE PEDESTAL
- TRANSFORMER
- SIGN
- BOLLARD
- WETLANDS

- TREE (W/SIZE)
- BUSH
- TREE LINE
- GRATE INLET
- STORM MANHOLE
- SANITARY MANHOLE
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
- CLEAN OUT
- ROOF DRAIN
- DENOTES PARKING COUNT
- TITLE EXCEPTION
- BENCHMARK
- PAINTED ARROWS
- WHEEL STOP
- HANDICAP PARKING
- MONITORING WELL
- U BOLLARD
- STOP BAR
- SOIL BORING
- 20' B&L
- CENTERLINE
- EASEMENT LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- BUILDING WITH HATCH
- PROPERTY LINE
- ADJACENT PROPERTY LINE

DEMOLITION LEGEND

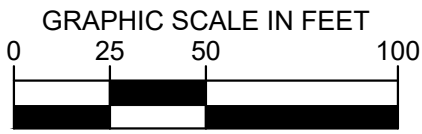
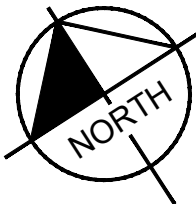
- LIMITS OF DISTURBANCE
- TREE TO BE REMOVED
- EXISTING UTILITIES TO BE REMOVED OR RELOCATED
- ASPHALT SAWCUT LINE
- EXISTING CURB TO BE REMOVED
- EXISTING VEGETATION TO BE CLEARED AND GRUBBED
- EXISTING ACCESS ROAD OR ASPHALT/GRAVEL TO BE REMOVED

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- WETLAND DELINEATION BY KIMLEY-HORN, MAY 13, 2025



Plotted By:McGray, Stephen Sheet Set:Kha Layout:CV-102 EXISTING CONDITIONS & DEMOLITION PLAN November 05, 2025 04:12:39pm
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EXISTING CONDITIONS LEGEND

- × TC 262.83 TOP OF CURB ELEVATION
- × G 262.83 FLOWLINE ELEVATION
- × EP 262.83 EDGE OF PAVEMENT ELEVATION
- × 262.83 SPOT ELEVATION
- 262 — EXISTING CONTOUR
- — — — — APPROX. LOC. UNDERGROUND ELECTRIC
- · · · · APPROX. LOC. UNDERGROUND WATER
- FO — APPROX. LOC. ATION UNDERGROUND TELEPHONE
- GAS — APPROX. LOC. UNDERGROUND GAS
- — — — — APPROX. LOC. SEWER LINE
- · · · · OVERHEAD WIRES
- — — — — METAL OR WOOD FENCE
- — — — — CHAIN LINK FENCE
- — — — — WIRE FENCE
- WV WATER VALVE
- WM WATER METER
- WMH WATER MANHOLE
- FD FIRE HYDRANT
- GV GAS VALVE
- GM GAS METER
- UP UTILITY POLE
- GW GUY WIRE
- EM ELECTRIC METER
- EB ELECTRIC BOX
- TP TELEPHONE PEDESTAL
- TR TRANSFORMER
- S SIGN
- B BOLLARD
- WETLANDS

- TREE (W/SIZE)
- BUSH
- TREE LINE
- GRATE INLET
- STORM MANHOLE
- SANITARY MANHOLE
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
- CLEAN OUT
- ROOF DRAIN
- DENOTES PARKING COUNT
- TITLE EXCEPTION
- BENCHMARK
- PAINTED ARROWS
- WHEEL STOP
- HANDICAP PARKING
- MONITORING WELL
- U BOLLARD
- STOP BAR
- SOIL BORING
- 20\"/>
- CENTERLINE
- EASEMENT LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- BUILDING WITH HATCH
- PROPERTY LINE
- ADJACENT PROPERTY LINE

DEMOLITION LEGEND

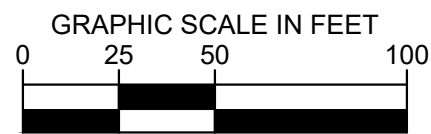
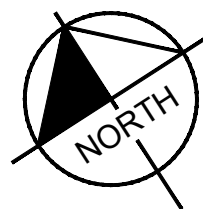
- LIMITS OF DISTURBANCE
- TREE TO BE REMOVED
- EXISTING UTILITIES TO BE REMOVED OR RELOCATED
- ASPHALT SAWCUT LINE
- EXISTING CURB TO BE REMOVED
- EXISTING VEGETATION TO BE CLEARED AND GRUBBED
- EXISTING ACCESS ROAD OR ASPHALT/GRAVEL TO BE REMOVED

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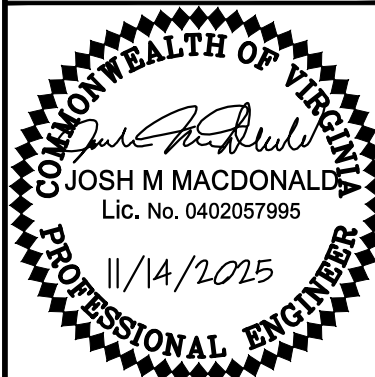
SURVEY NOTES

- FIELD SURVEY PREPARED BY GRS GROUP, LLC SEPTEMBER 3, 2024 THROUGH SEPTEMBER 21, 2024
- WETLAND DELINEATION BY KIMLEY-HORN, MAY 13, 2025



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PHONE: 804-673-8882
WWW.KIMLEY-HORN.COM



KHA PROJECT	113706001	DATE	11/14/2025	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
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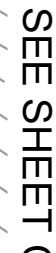
EXISTING
CONDITIONS &
DEMOLITION PLAN

PROJECT HERCULES

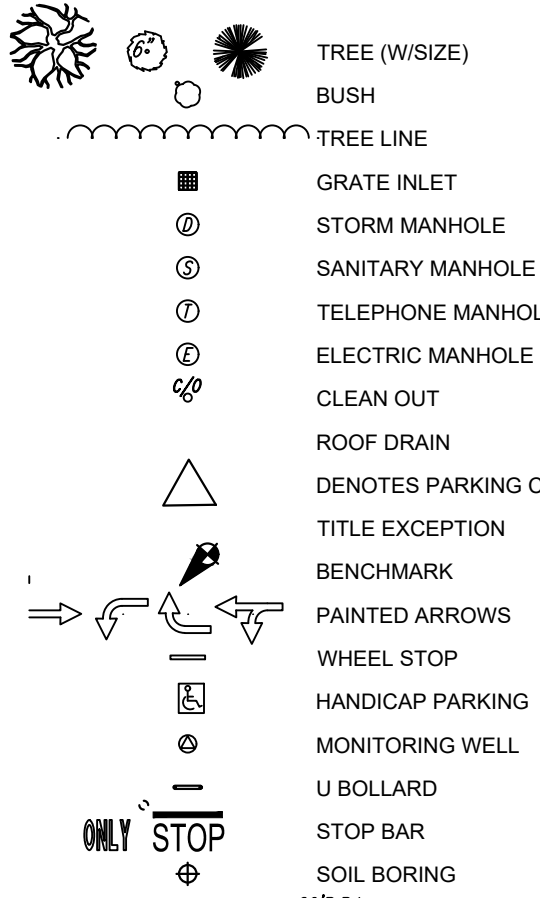
SHEET NUMBER
CV-102

VA

APPOMATTOX COUNTY



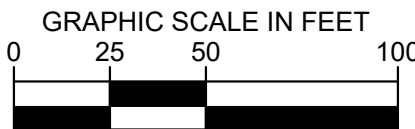
	TOP OF CURB ELEVATION
	FLOWLINE ELEVATION
	EDGE OF PAVEMENT ELEVATION
	SPOT ELEVATION
	EXISTING CONTOUR
	APPROX. LOC. UNDERGROUND ELECTRIC
	APPROX. LOC. UNDERGROUND WATER
	APPROX. LOC. ACTION UNDERGROUND TELEPHONE
	APPROX. LOC. UNDERGROUND GAS
	APPROX. LOC. SEWER LINE
	OVERHEAD WIRES
	METAL OR WOOD FENCE
	CHAIN LINK FENCE
	WIRE FENCE
	WATER VALVE
	WATER METER
	WATER MANHOLE
	FIRE HYDRANT
	GAS VALVE
	GAS METER
	UTILITY POLE
	GUY WIRE
	ELECTRIC METER
	ELECTRIC BOX
	TELEPHONE PEDESTAL
	TRANSFORMER
	SIGN
	BOLLARD



	LIMITS OF DISTURBANCE
	TREE TO BE REMOVED
	EXISTING UTILITIES TO BE REMOVED OR RELOCATED
	ASPHALT SAWCUT LINE
	EXISTING CURB TO BE REMOVED
	EXISTING VEGETATION TO BE CLEARED AND GRUBBED
	EXISTING ACCESS ROAD OR ASPHALT/GRAVEL TO BE REMOVED

1. THIS EXISTING CONDITION/DEMOLITION PLAN IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION AND FOR THE DEMOLITION, REMOVAL, OR RELOCATION OF ITEMS IN CONFLICT WITH THE PROPOSED CONSTRUCTION.

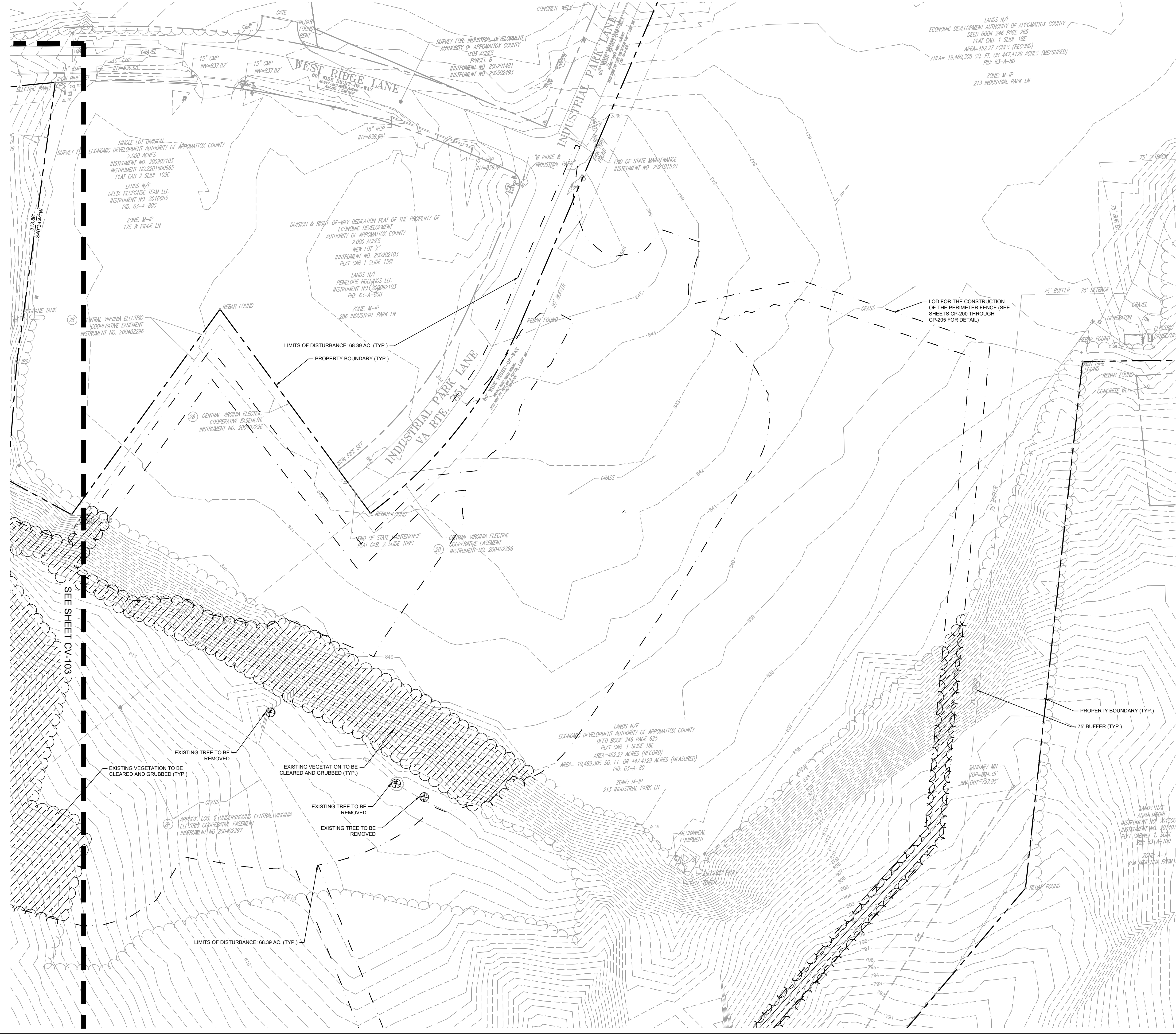
1. FIELD SURVEY PREPARED BY GRS GROUP, LLC SEPTEMBER 3, 2024 THROUGH SEPTEMBER 21, 2024.
2. WETLAND DELINEATION BY KIMLEY-HORN, MAY 13, 2025



KHA PROJECT 113706001	DATE 11/14/2025	SCALE	AS SHOWN
		DESIGNED BY	STM
		DRAWN BY	STM

PROJECT HERCULES

Plotted By:McGray, Stephen Sheet Set:Kha Layout:CV-104 EXISTING CONDITIONS & DEMOLITION PLAN November 05, 2025 04:13:30pm
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EXISTING CONDITIONS LEGEND

- × TC 262.83 TOP OF CURB ELEVATION
- × G 262.83 FLOWLINE ELEVATION
- × EP 262.83 EDGE OF PAVEMENT ELEVATION
- × 262.83 SPOT ELEVATION
- 262 --- EXISTING CONTOUR
- --- APPROX. LOC. UNDERGROUND ELECTRIC
- --- APPROX. LOC. UNDERGROUND WATER
- --- APPROX. LOC. ACTION UNDERGROUND TELEPHONE
- --- APPROX. LOC. UNDERGROUND GAS
- --- APPROX. LOC. SEWER LINE
- --- OVERHEAD WIRES
- --- METAL OR WOOD FENCE
- --- CHAIN LINK FENCE
- --- WIRE FENCE
- ⊕ WATER VALVE
- ⊕ WATER METER
- ⊕ WATER MANHOLE
- ⊕ FIRE HYDRANT
- ⊕ GAS VALVE
- ⊕ GAS METER
- ⊕ UTILITY POLE
- ⊕ GUY WIRE
- ⊕ ELECTRIC METER
- ⊕ ELECTRIC BOX
- ⊕ TELEPHONE PEDESTAL
- ⊕ TRANSFORMER
- ⊕ SIGN
- ⊕ BOLLARD
- WETLANDS

- ⊕ TREE (WISIZE)
- ⊕ BUSH
- TREE LINE
- ⊕ GRATE INLET
- ⊕ STORM MANHOLE
- ⊕ SANITARY MANHOLE
- ⊕ TELEPHONE MANHOLE
- ⊕ ELECTRIC MANHOLE
- ⊕ CLEAN OUT
- ⊕ ROOF DRAIN
- ⊕ DENOTES PARKING COUNT
- ⊕ TITLE EXCEPTION
- ⊕ BENCHMARK
- ⊕ PAINTED ARROWS
- ⊕ WHEEL STOP
- ⊕ HANDICAP PARKING
- ⊕ MONITORING WELL
- ⊕ U BOLLARD
- ⊕ STOP BAR
- ⊕ SOIL BORING
- CENTERLINE
- EASEMENT LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- BUILDING WITH HATCH
- PROPERTY LINE
- ADJACENT PROPERTY LINE

DEMOLITION LEGEND

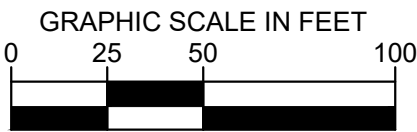
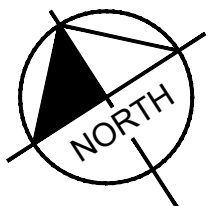
- LIMITS OF DISTURBANCE
- ⊗ TREE TO BE REMOVED
- EXISTING UTILITIES TO BE REMOVED OR RELOCATED
- ASPHALT SAWCUT LINE
- X-X-X EXISTING CURB TO BE REMOVED
- EXISTING VEGETATION TO BE CLEARED AND GRUBBED
- EXISTING ACCESS ROAD OR ASPHALT/GRAVEL TO BE REMOVED

DEMOLITION NOTES

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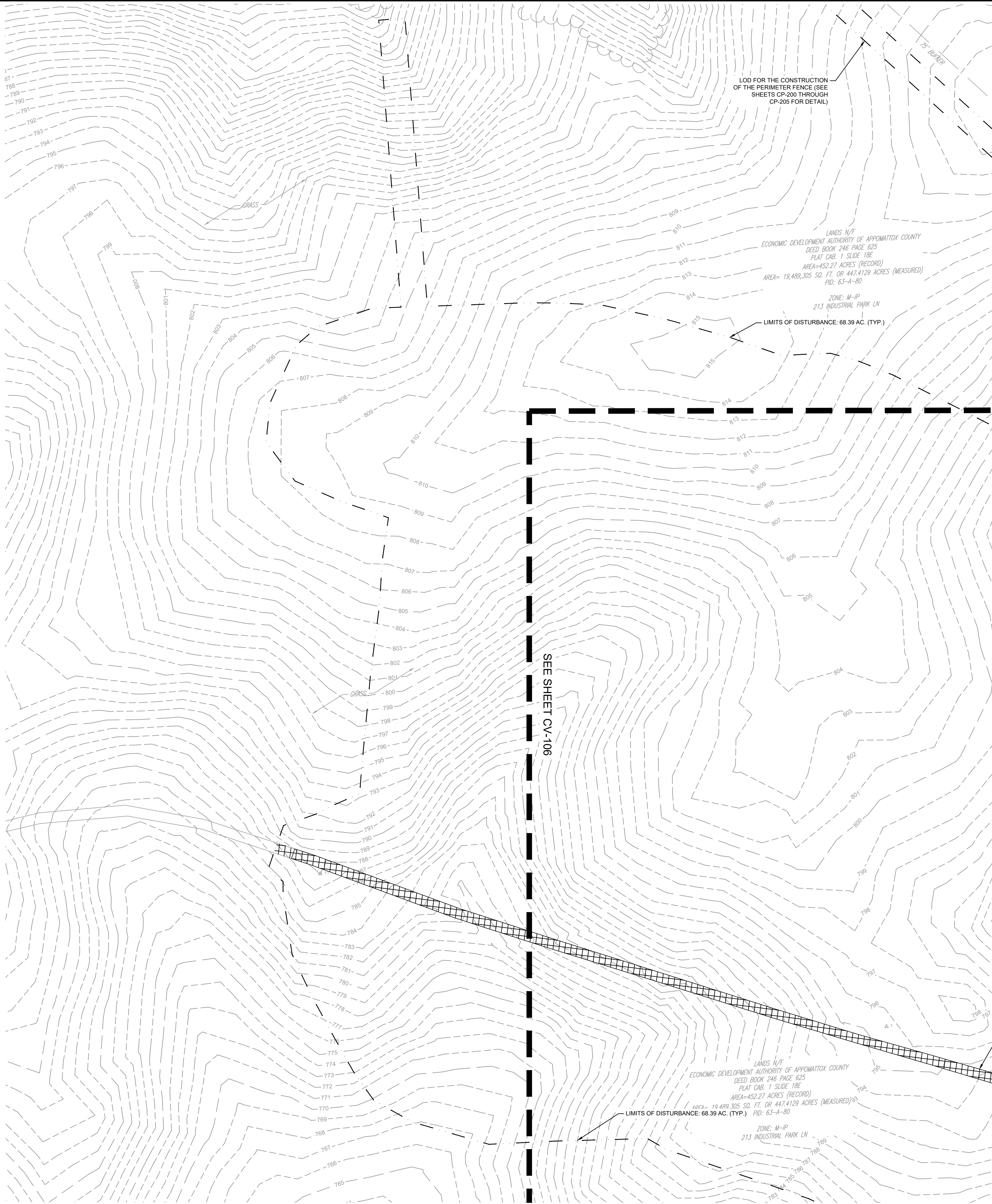
KHA PROJECT	113706001
DATE	11/14/2025
SCALE	AS SHOWN
DESIGNED BY	STM
DRAWN BY	STM
CHECKED BY	JMM

EXISTING CONDITIONS & DEMOLITION PLAN

PROJECT HERCULES

SHEET NUMBER
CV-104

VA
APPOMATTOX COUNTY



EXISTING CONDITIONS LEGEND

- × TC 262.83 TOP OF CURB ELEVATION
- × G 262.83 FLOWLINE ELEVATION
- × EP 262.83 EDGE OF PAVEMENT ELEVATION
- × 262.83 SPOT ELEVATION
- 262 --- EXISTING CONTOUR
- APPROX. LOC. UNDERGROUND ELECTRIC
- APPROX. LOC. UNDERGROUND WATER
- FD --- APPROX. LOC. ATION UNDERGROUND TELEPHONE
- GAS --- APPROX. LOC. UNDERGROUND GAS
- APPROX. LOC. SEWER LINE
- OVERHEAD WIRES
- METAL OR WOOD FENCE
- CHAIN LINK FENCE
- WIRE FENCE
- WATER VALVE
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WETLANDS

- TREE (W/SIZE)
- BUSH
- TREE LINE
- GRATE INLET
- STORM MANHOLE
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- TELEPHONE MANHOLE
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- CLEAN OUT
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- WHEEL STOP
- HANDICAP PARKING
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- U BOLLARD
- STOP BAR
- SOIL BORING
- 20' B/L
- CENTERLINE
- EASEMENT LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- BUILDING WITH HATCH
- PROPERTY LINE
- ADJACENT PROPERTY LINE

DEMOLITION LEGEND

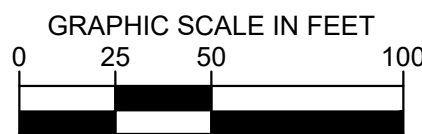
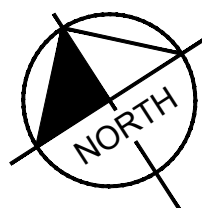
- LIMITS OF DISTURBANCE
- ⊗ TREE TO BE REMOVED
- EXISTING UTILITIES TO BE REMOVED OR RELOCATED
- ASPHALT SAWCUT LINE
- X-X-X--- EXISTING CURB TO BE REMOVED
- EXISTING VEGETATION TO BE CLEARED AND GRUBBED
- EXISTING ACCESS ROAD OR ASPHALT/GRAVEL TO BE REMOVED

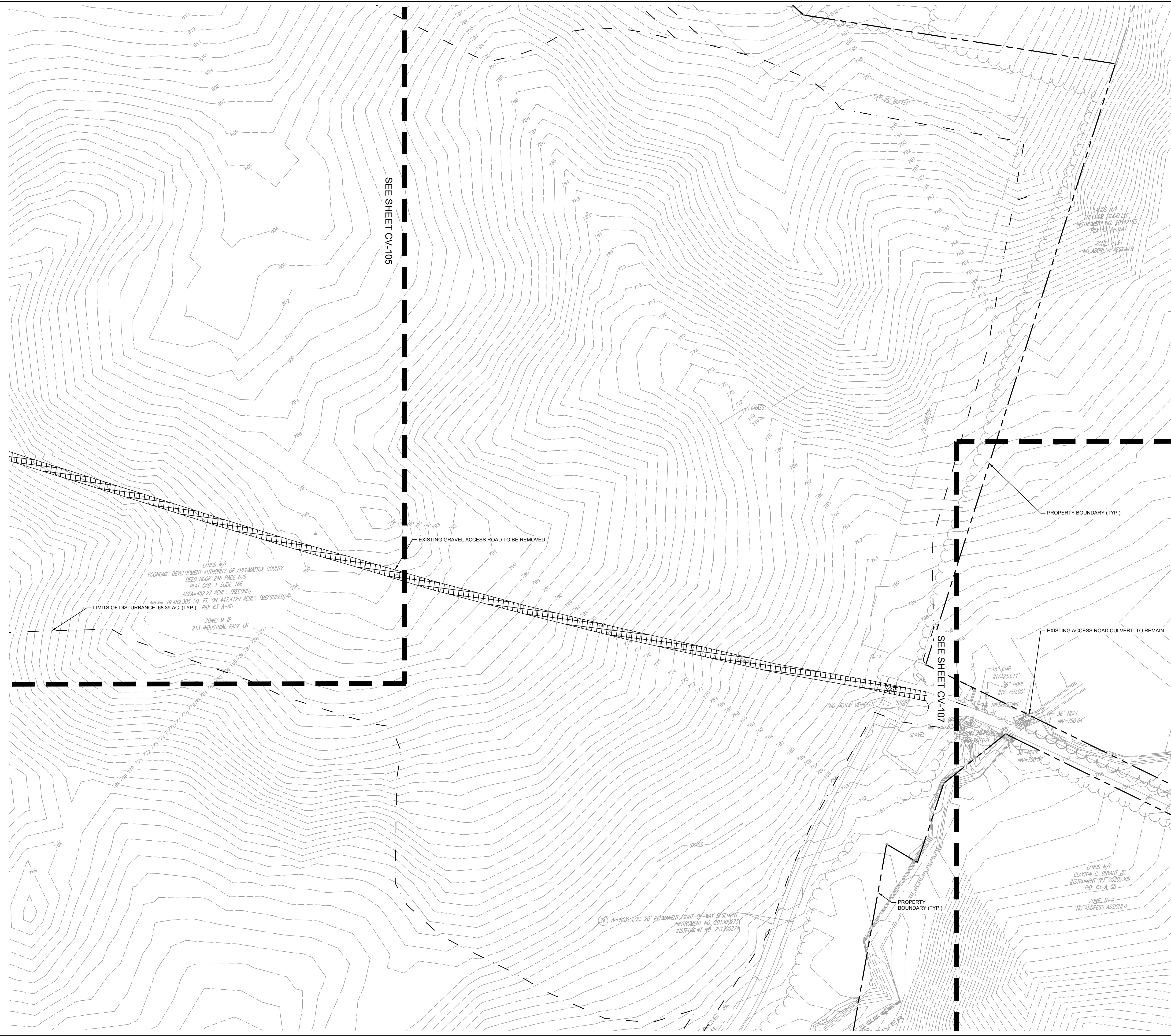
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- WETLAND DELINEATION BY KIMLEY-HORN, MAY 13, 2025



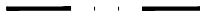
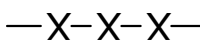


EXISTING CONDITIONS LEGEND

	TC 262.83	TOP OF CURB ELEVATION
	FL 262.83	FLOWLINE ELEVATION
	EP 262.83	EDGE OF PAVEMENT ELEVATION
	262.83	SPOT ELEVATION
	262	EXISTING CONTOUR
		APPROX. LOC. UNDERGROUND ELECTRIC
		APPROX. LOC. UNDERGROUND WATER
	FO	APPROX. LOC. ATION UNDERGROUND TELEPHONE
	GAS	APPROX. LOC. UNDERGROUND GAS
		APPROX. LOC. SEWER LINE
		OVERHEAD WIRES
		METAL OR WOOD FENCE
		CHAIN LINK FENCE
		WIRE FENCE
	WV	WATER VALVE
	WM	WATER METER
	W	WATER MANHOLE
	OH	FIRE HYDRANT
	GV	GAS VALVE
	GM	GAS METER
		UTILITY POLE
		GUY WIRE
	EM	ELECTRIC METER
	EB	ELECTRIC BOX
	TP	TELEPHONE PEDESTAL
	TR	TRANSFORMER
		SIGN
		BOLLARD

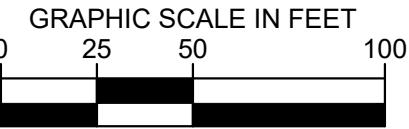
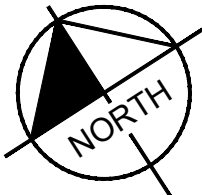
	WETLANDS
	TREE (WISIZE)
	BUSH
	TREE LINE
	GRATE INLET
	STORM MANHOLE
	SANITARY MANHOLE
	TELEPHONE MANHOLE
	ELECTRIC MANHOLE
	CLEAN OUT
	ROOF DRAIN
	DENOTES PARKING COUNT
	TITLE EXCEPTION
	BENCHMARK
	PAINTED ARROWS
	WHEEL STOP
	HANDICAP PARKING
	MONITORING WELL
	U BOLLARD
	STOP BAR
	SOIL BORING
	20' B.P.L.
	CENTERLINE
	EASEMENT LINE
	MAJOR CONTOUR
	MINOR CONTOUR
	BUILDING WITH HATCH
	PROPERTY LINE
	ADJACENT PROPERTY LINE

DEMOLITION LEGEND

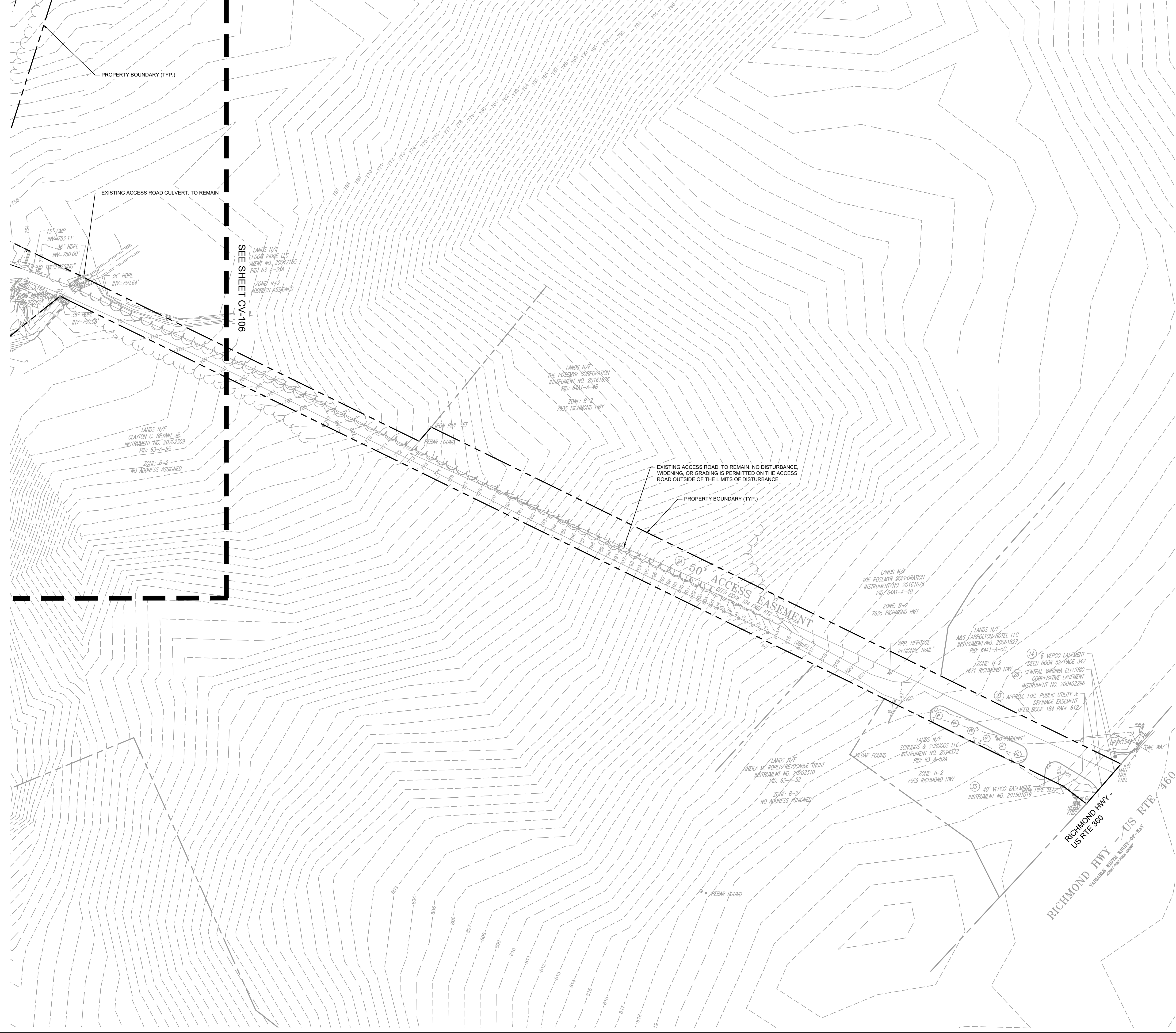
	LIMITS OF DISTURBANCE
	TREE TO BE REMOVED
	EXISTING UTILITIES TO BE REMOVED OR RELOCATED
	ASPHALT SAWCUT LINE
	EXISTING CURB TO BE REMOVED
	EXISTING VEGETATION TO BE CLEARED AND GRUBBED
	EXISTING ACCESS ROAD OR ASPHALT/GRAVEL TO BE REMOVED

- ## **DEMOLITION NOTES**
1. THIS EXISTING CONDITION/DEMOLITION PLAN IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION AND FOR THE DEMOLITION, REMOVAL, OR RELOCATION OF ITEMS IN CONFLICT WITH THE PROPOSED CONSTRUCTION.

- ## **SURVEY NOTES**
1. FIELD SURVEY PREPARED BY GRS GROUP, LLC SEPTEMBER 3, 2024 THROUGH SEPTEMBER 21, 2024.
 2. WETLAND DELINEATION BY KIMLEY-HORN, MAY 13, 2025



Plotted By:McGray, Stephen Sheet Set:Kha Layout:CV-107 EXISTING CONDITIONS & DEMOLITION PLAN November 05, 2025 04:14:44pm
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EXISTING CONDITIONS LEGEND	
× TC 262.83	TOP OF CURB ELEVATION
× G 262.83	FLOWLINE ELEVATION
× EP 262.83	EDGE OF PAVEMENT ELEVATION
× 262.83	SPOT ELEVATION
— 262 —	EXISTING CONTOUR
---	APPROX. LOC. UNDERGROUND ELECTRIC
---	APPROX. LOC. UNDERGROUND WATER
---	APPROX. LOC. ATION UNDERGROUND TELEPHONE
---	APPROX. LOC. UNDERGROUND GAS
---	APPROX. LOC. SEWER LINE
---	OVERHEAD WIRES
---	METAL OR WOOD FENCE
---	CHAIN LINK FENCE
---	WIRE FENCE
⊕	WATER VALVE
⊕	WATER METER
⊕	WATER MANHOLE
⊕	FIRE HYDRANT
⊕	GAS VALVE
⊕	GAS METER
⊕	UTILITY POLE
⊕	GUY WIRE
⊕	ELECTRIC METER
⊕	ELECTRIC BOX
⊕	TELEPHONE PEDESTAL
⊕	TRANSFORMER
⊕	SIGN
⊕	BOLLARD

WETLANDS	
TREE (W/SIZE)	
BUSH	
TREE LINE	
GRATE INLET	
STORM MANHOLE	
SANITARY MANHOLE	
TELEPHONE MANHOLE	
ELECTRIC MANHOLE	
CLEAN OUT	
ROOF DRAIN	
DENOTES PARKING COUNT	
TITLE EXCEPTION	
BENCHMARK	
PAINTED ARROWS	
WHEEL STOP	
HANDICAP PARKING	
MONITORING WELL	
U BOLLARD	
STOP BAR	
SOIL BORING	
CENTERLINE	
EASEMENT LINE	
MAJOR CONTOUR	
MINOR CONTOUR	
BUILDING WITH HATCH	
PROPERTY LINE	
ADJACENT PROPERTY LINE	

DEMOLITION LEGEND	
⊗	LIMITS OF DISTURBANCE
⊗	TREE TO BE REMOVED
⊗	EXISTING UTILITIES TO BE REMOVED OR RELOCATED
---	ASPHALT SAWCUT LINE
⊗	EXISTING CURB TO BE REMOVED
⊗	EXISTING VEGETATION TO BE CLEARED AND GRUBBED
⊗	EXISTING ACCESS ROAD OR ASPHALT/GRAVEL TO BE REMOVED

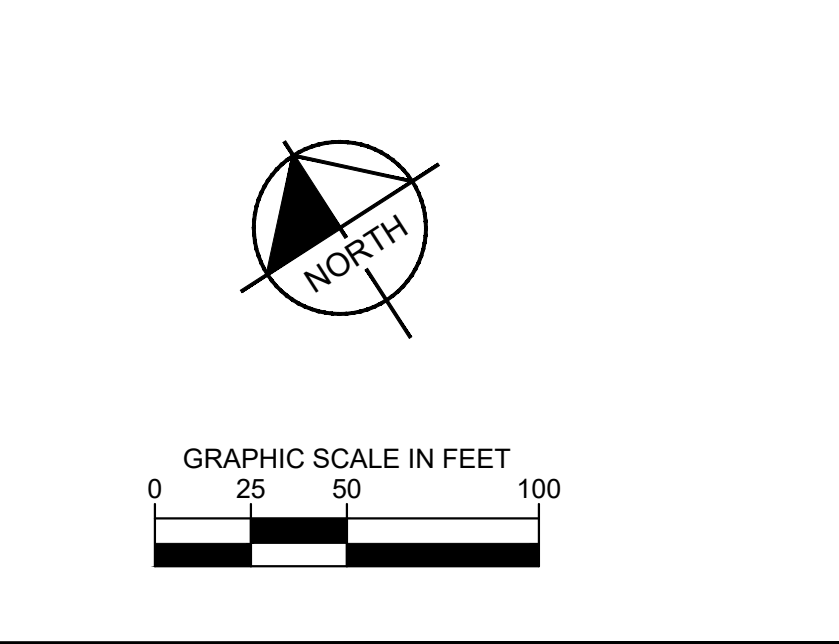
DEMOLITION NOTES

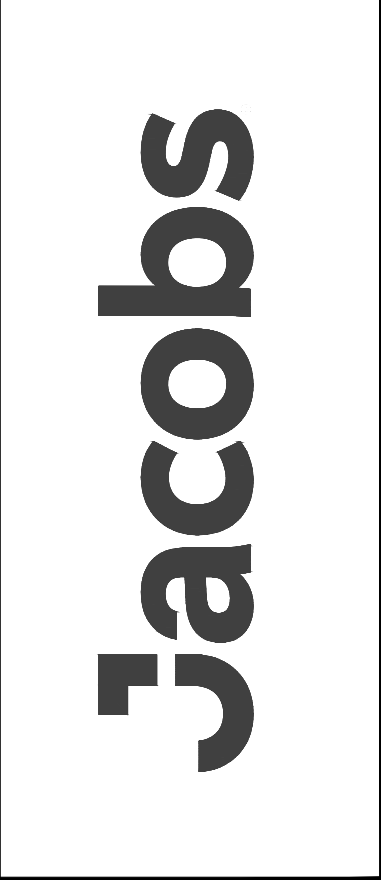
1. THIS EXISTING CONDITION/DEMOLITION PLAN IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION AND FOR THE DEMOLITION, REMOVAL, OR RELOCATION OF ITEMS IN CONFLICT WITH THE PROPOSED CONSTRUCTION.

SURVEY NOTES

1. FIELD SURVEY PREPARED BY GR5 GROUP, LLC SEPTEMBER 3, 2024 THROUGH SEPTEMBER 21, 2024.

2. WETLAND DELINEATION BY KIMLEY-HORN, MAY 13, 2025





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JOSH M. MACDONALD
Lic. No. 0402057995
11/14/2025
PROFESSIONAL ENGINEER

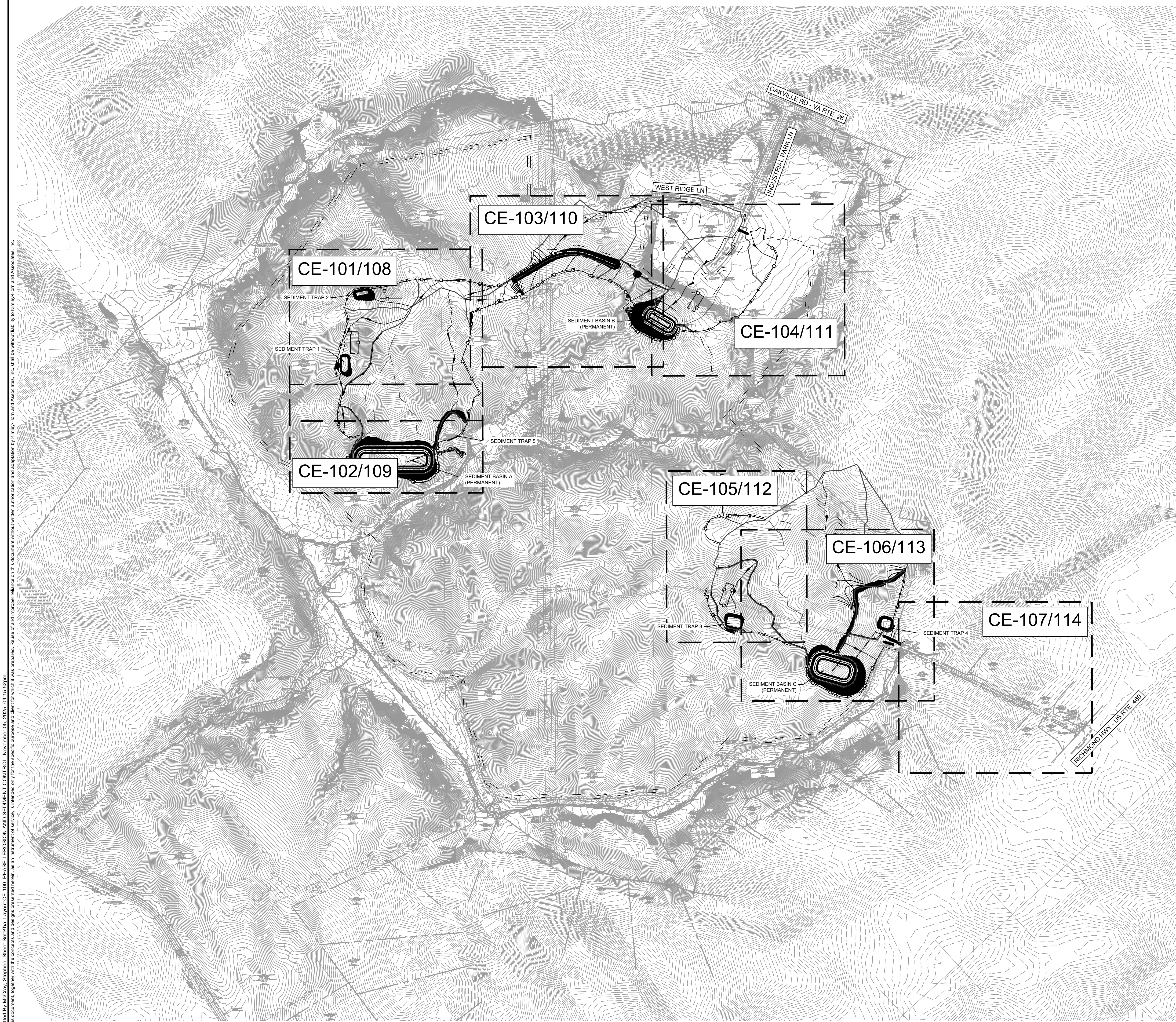
KHA PROJECT	113706001	DATE	11/14/2025	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
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EXISTING
CONDITIONS &
DEMOLITION PLAN

PROJECT HERCULES

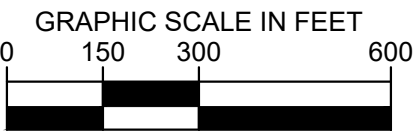
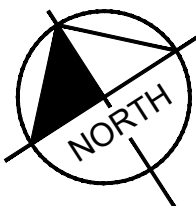
APPOMATTOX COUNTY

SHEET NUMBER
CV-107



VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL		
	CE	CONSTRUCTION ENTRANCE
	SF	SILT FENCE
	SSF	SUPER SILT FENCE
	IP	INLET PROTECTION
	CIP	CULVERT INLET PROTECTION
	DD	DIVERSION DIKE
	FD	FILL DIVERSION
	ST	SEDIMENT TRAP
	SB	SEDIMENT BASIN
	OP	OUTLET PROTECTION
	CD	ROCK CHECK DAM
	TS	TEMPORARY SEEDING
	PS	PERMANENT SEEDING
	BM	BLANKET MATTING
		LIMITS OF DISTURBANCE
		DIVERSION
	SFO	SILT FENCE OUTLET
		DRAINAGE AREA BOUNDARY
		DIVERSION BOUNDARY
		"J-HOOK" SILT FENCE

- EROSION AND SEDIMENT CONTROL NOTES**
- SEE SHEETS CV-101 - CV-106 FOR DEMOLITION PLAN.
 - SEE SHEETS CE-100 THROUGH CE-504 FOR EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.
 - SEE SHEETS CP-501 AND CP-502 FOR PLANTING BED AND SODDING DETAILS.
 - TEMPORARY SEEDING SHOULD BE PLACED IN ALL DISTURBED AREAS.
 - SEE TABLES ON SHEET CE-503 FOR SEDIMENT BASIN AND SEDIMENT TRAP DETAILS.
 - SEE SHEET CE-501 FOR PHASE I PROBABLE CONSTRUCTION SEQUENCE.
 - SEE SHEET CE-503 FOR DIVERSION CALCULATIONS. CONTRACTOR TO INSTALL CHANNEL LININGS AS NOTED IN THE "PHASE I E&S DITCH DESIGN SUMMARY TABLE" ON SHEET CE-503.
 - FLOW PATHS HAVE BEEN PROVIDED FOR AREAS DRAINING TO SUPER SILT FENCE TO DEMONSTRATE COMPLIANCE WITH TABLE C-PCM-04-2 OF THE 2024 VIRGINIA STORMWATER MANAGEMENT HANDBOOK.
 - PORTIONS OF LOD WITHOUT A PERIMETER CONTROL SHALL BE STAKED AND MARKED WITH FLAGS SO CONTRACTOR DOES NOT PERFORM WORK OUTSIDE OF LOD.
 - SILT FENCE TO BE UTILIZED ON THE LOW SIDE OF ALL 20' WIDE SECURITY FENCE INSTALLATION LOD CORRIDOR. WITH PORTIONS OF SILT FENCE INSTALLED PRIOR TO FENCE INSTALLATION. THEN REMOVED ONCE STABILIZED AND PERMANENT SEEDING APPLIED. WATER TO SHEET FLOW ACROSS THE 20' INSTALLATION CORRIDOR TO THE MAXIMUM EXTENT PRACTICAL. CONTRACTOR TO WORK IN LIMITED SEGMENTS AT THE DISCRETION OF THE LOCAL E&S INSPECTOR. WITH SUBSEQUENT SEGMENTS NOT INSTALLED UNTIL SECURITY FENCE IS INSTALLED. PORTION OF LOD IS RESTABILIZED/SEEDED, AND CORRESPONDING SILT FENCE REMOVED. SEE SHEET CE-503 FOR TYPICAL DETAIL.



PROJECT HERCULES

OVERALL PHASE I
EROSION AND
SEDIMENT CONTROL

SHEET NUMBER
CE-100

APPOMATTOX COUNTY

VA

KHA PROJECT
113706001

DATE
11/14/2025

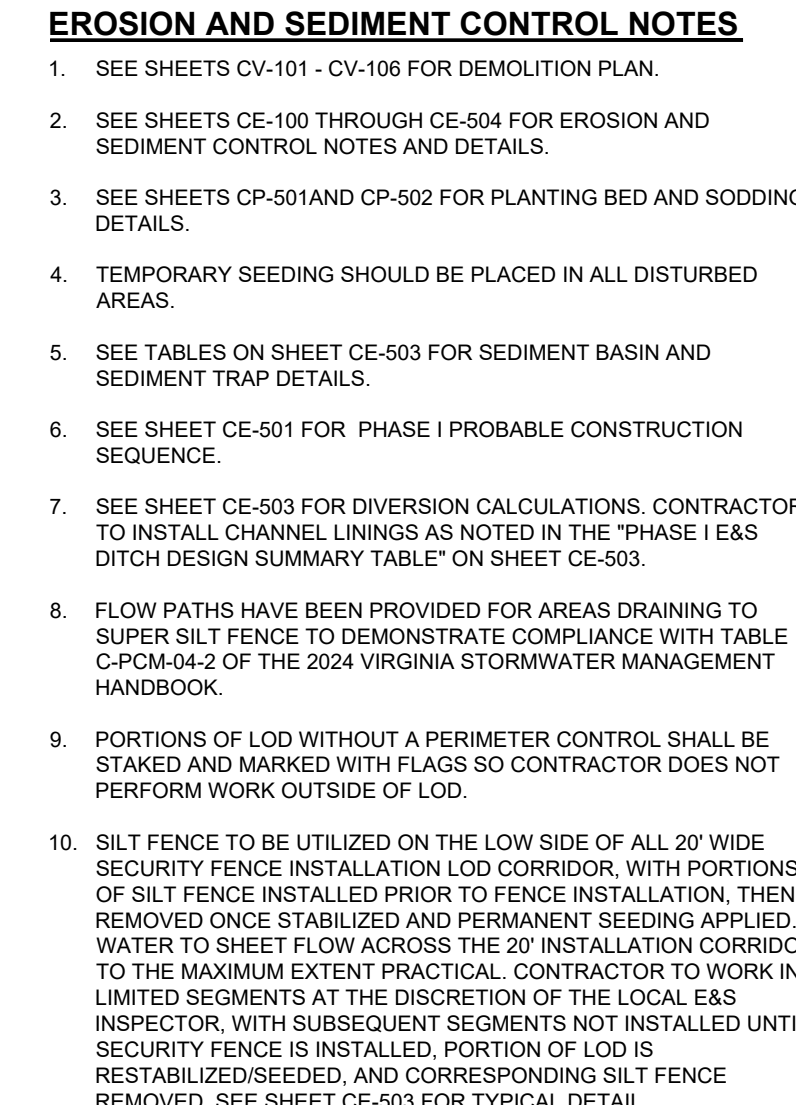
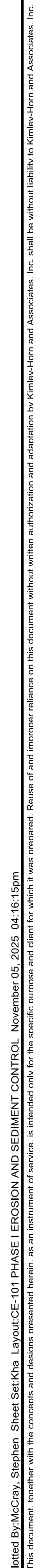
SCALE AS SHOWN

DESIGNED BY
STM

DRAWN BY
STM

CHECKED BY
JMM

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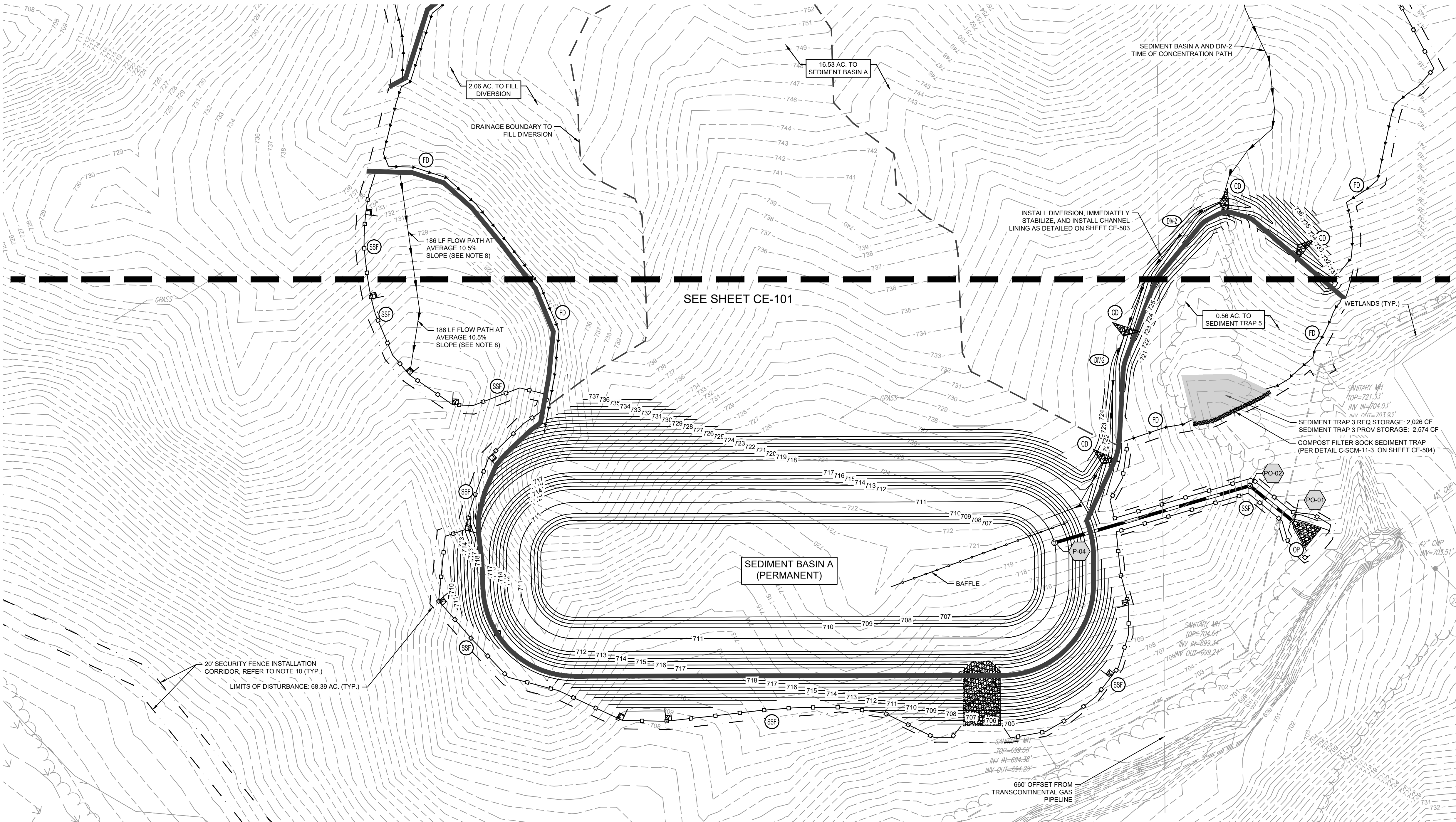


KHA PROJECT 113706001	DATE 11/14/2025	SCALE AS SHOWN	DESIGNED BY STM	DRAWN BY STM	CHECKED BY JMM
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PHASE I EROSION AND SEDIMENT CONTROL

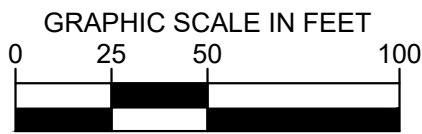
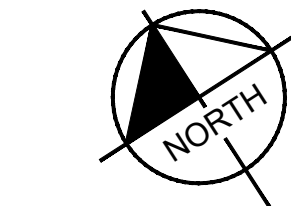
PROJECT HERCULES	VA
APPOMATTOX COUNTY	SHEET NUMBER CE-101

Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CE-102 PHASE I EROSION AND SEDIMENT CONTROL November 05, 2025 04:16:38pm
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VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL		
	CE	CONSTRUCTION ENTRANCE
	SF	SILT FENCE
	SSF	SUPER SILT FENCE
	IP	INLET PROTECTION
	CIP	CULVERT INLET PROTECTION
	DD	DIVERSION DIKE
	FD	FILL DIVERSION
	ST	SEDIMENT TRAP
	SB	SEDIMENT BASIN
	OP	OUTLET PROTECTION
	CD	ROCK CHECK DAM
	TS	TEMPORARY SEEDING
	PS	PERMANENT SEEDING
	BM	BLANKET MATTING
		LIMITS OF DISTURBANCE
	DX	DIVERSION
	SFO	SILT FENCE OUTLET
		DRAINAGE AREA BOUNDARY
		DIVERSION BOUNDARY
		"J-HOOK" SILT FENCE

- EROSION AND SEDIMENT CONTROL NOTES**
- SEE SHEETS CV-101 - CV-106 FOR DEMOLITION PLAN.
 - SEE SHEETS CE-100 THROUGH CE-504 FOR EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.
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 - TEMPORARY SEEDING SHOULD BE PLACED IN ALL DISTURBED AREAS.
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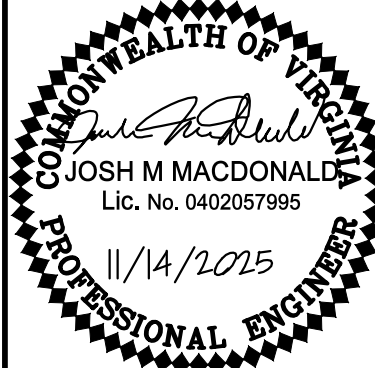


PROJECT HERCULES

PHASE I EROSION AND SEDIMENT CONTROL

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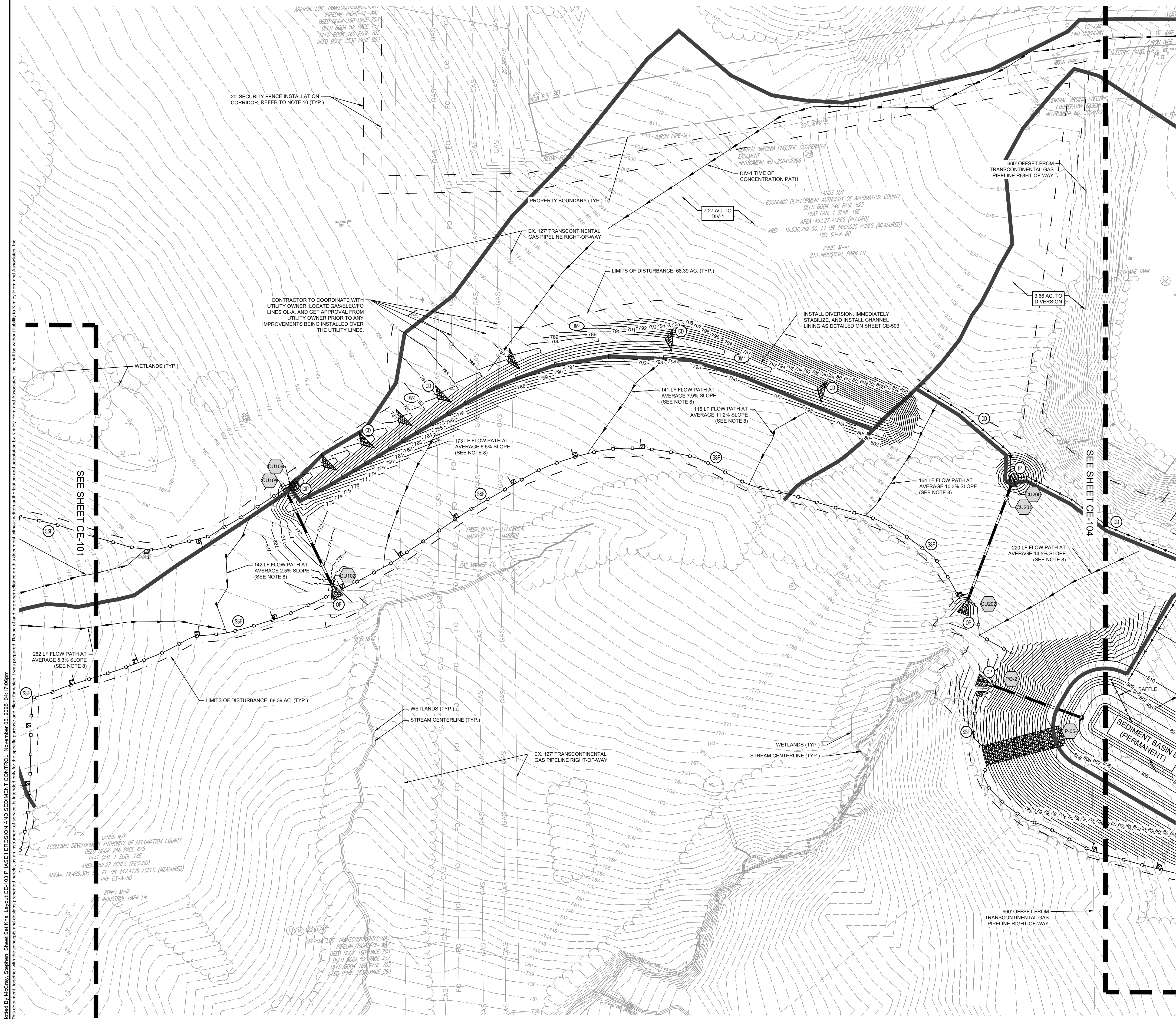


KHA PROJECT	113706001	DATE	11/14/2025	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
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SHEET NUMBER
CE-102

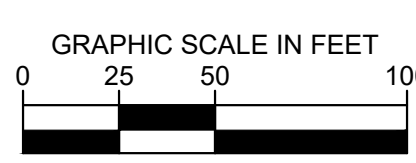
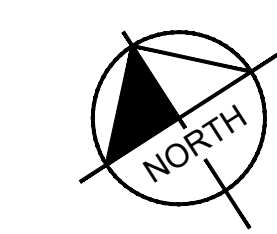
APPOMATTOX COUNTY

VA



VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL		
	CE	CONSTRUCTION ENTRANCE
	SF	SILT FENCE
	SSF	SUPER SILT FENCE
	IP	INLET PROTECTION
	CIP	CULVERT INLET PROTECTION
	DD	DIVERSION DIKE
	FD	FILL DIVERSION
	ST	SEDIMENT TRAP
	SB	SEDIMENT BASIN
	OP	OUTLET PROTECTION
	CD	ROCK CHECK DAM
	TS	TEMPORARY SEEDING
	PS	PERMANENT SEEDING
	BM	BLANKET MATTING
		LIMITS OF DISTURBANCE
	DX	DIVERSION
	SFO	SILT FENCE OUTLET
		DRAINAGE AREA BOUNDARY
		DIVERSION BOUNDARY
		"J-HOOK" SILT FENCE

- EROSION AND SEDIMENT CONTROL NOTES**
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COMMONWEALTH OF VIRGINIA

JOSH M. MACDONALD
Lic. No. 0402057995
11/14/2025
PROFESSIONAL ENGINEER

KHA PROJECT	113706001	DATE	11/14/2025	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
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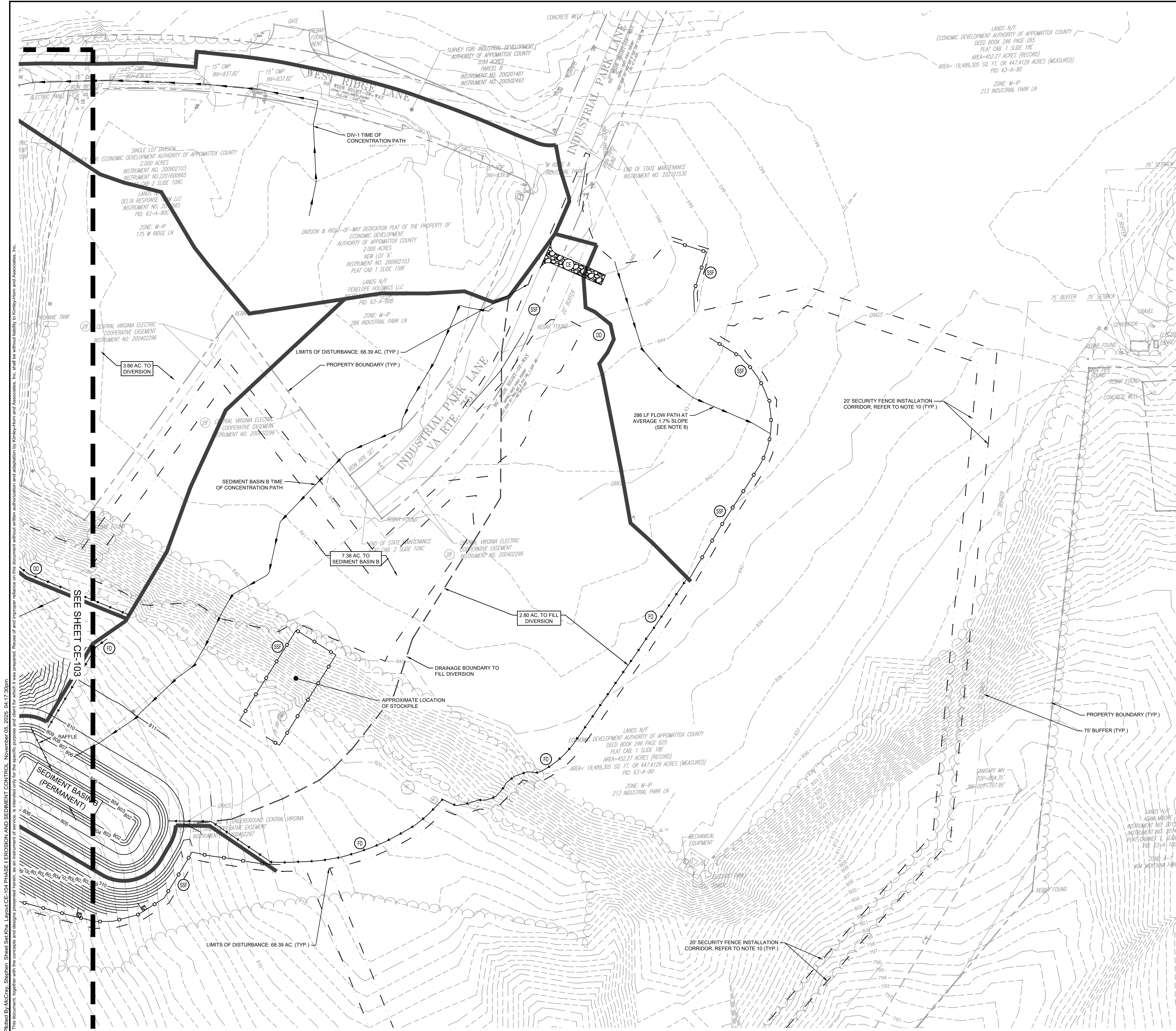
PHASE I EROSION AND SEDIMENT CONTROL

PROJECT HERCULES

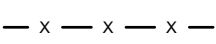
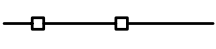
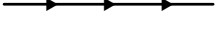
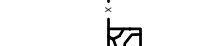
VA

APPOMATTOX COUNTY

SHEET NUMBER
CE-103

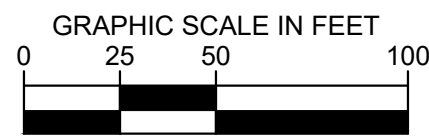
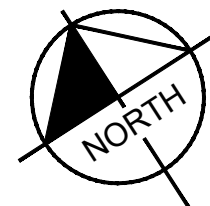


VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL

	(CE)	CONSTRUCTION ENTRANCE
	(SF)	SILT FENCE
	(SSF)	SUPER SILT FENCE
	(IP)	INLET PROTECTION
	(CIP)	CULVERT INLET PROTECTION
	(DD)	DIVERSION DIKE
	(FD)	FILL DIVERSION
	(ST)	SEDIMENT TRAP
	(SB)	SEDIMENT BASIN
	(OP)	OUTLET PROTECTION
	(CD)	ROCK CHECK DAM
	(TS)	TEMPORARY SEEDING
	(PS)	PERMANENT SEEDING
	(BM)	BLANKET MATTING
		LIMITS OF DISTURBANCE
	(DM/XX)	DIVERSION
	(SFO)	SILT FENCE OUTLET
		DRAINAGE AREA BOUNDARY
		DIVERSION BOUNDARY
		"J-HOOK" SILT FENCE

EROSION AND SEDIMENT CONTROL NOTES

1. SEE SHEETS CV-101 - CV-106 FOR DEMOLITION PLAN.
2. SEE SHEETS CV-100 THROUGH CV-504 FOR EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.
3. SEE SHEETS CP-501 AND CP-502 FOR PLANTING BED AND SODDING DETAILS.
4. TEMPORARY SEEDING SHOULD BE PLACED IN ALL DISTURBED AREAS.
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6. SEE SHEET CE-501 FOR PHASE I PROBABLE CONSTRUCTION SEQUENCE.
7. SEE SHEET CE-503 FOR DIVERSION CALCULATIONS. CONTRACTOR TO INSTALL CHANNEL LININGS AS NOTED IN THE "PHASE I E&S DRAIN DESIGN SUMMARY TABLE" ON SHEET CE-503.
8. FLOW PATHS HAVE BEEN PROVIDED FOR AREAS DRAINING TO SUPER SILT FENCE TO DEMONSTRATE COMPLIANCE WITH TABLE C-PCM-04-02 OF THE 2024 VIRGINIA STORMWATER MANAGEMENT HANDBOOK.
9. PORTIONS OF LOD WITHOUT A PERIMETER CONTROL SHALL BE STAKED AND MARKED WITH FLAGS SO CONTRACTOR DOES NOT PERFORM WORK OUTSIDE OF LOD.
10. SILT FENCE TO BE UTILIZED ON THE LOW SIDE OF ALL 20' WIDE SECURITY FENCE INSTALLATION LOD CORRIDOR, WITH PORTIONS OF SILT FENCE INSTALLED PRIOR TO FENCE INSTALLATION, THEN REMOVED ONCE STABILIZED AND PERMANENT SEEDING APPLIED. WATER TO SHEET FLOW ACROSS THE 20' INSTALLATION CORRIDOR TO MAXIMUM EXTENT PRACTICAL. CONTRACTOR TO WORK IN LIMITED SEGMENTS AT THE DISCRETION OF THE LOCAL E&S INSPECTOR. WITH SUBSEQUENT SEGMENTS NOT INSTALLED UNTIL SECURITY FENCE IS INSTALLED. PORTION OF LOD IS TO BE RE-UTILIZED AND CORRESPONDING SILT FENCE REMOVED. SEE SHEET CE-503 FOR TYPICAL DETAIL.



PROJECT HERCULES
PHASE I EROSION AND SEDIMENT CONTROL

VA
APPOMATTOX COUNTY

113706001	DATE	11/14/2025
SCALE	AS SHOWN	STM
DESIGNED BY	STM	STM
DRAWN BY	STM	JMM
CHECKED BY	JMM	

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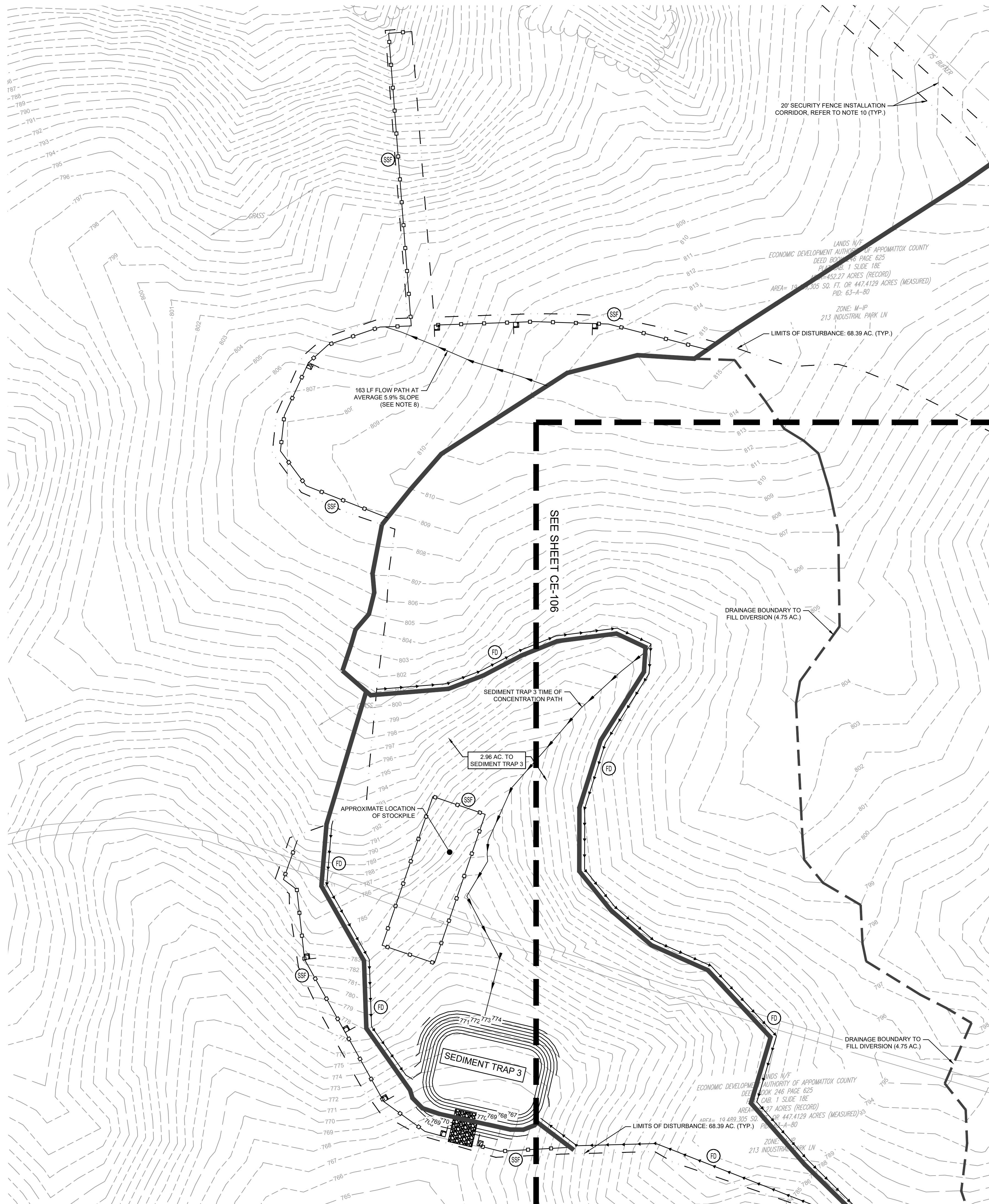
Jacobs

COMMONWEALTH OF VIRGINIA

JOSH M MACDONALENY
LIC. NO. 042057995
11/14/2025
PROFESSIONAL ENGINEER

SHEET NUMBER

CE-104

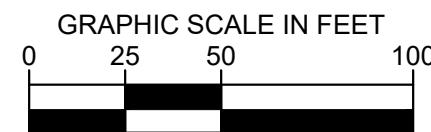
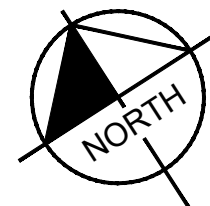


VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL

	(CE)	CONSTRUCTION ENTRANCE
	(SF)	SILT FENCE
	(SSF)	SUPER SILT FENCE
	(IP)	INLET PROTECTION
	(CIP)	CULVERT INLET PROTECTION
	(DD)	DIVERSION DIKE
	(FD)	FILL DIVERSION
	(ST)	SEDIMENT TRAP
	(SB)	SEDIMENT BASIN
	(OP)	OUTLET PROTECTION
	(CD)	ROCK CHECK DAM
	(TS)	TEMPORARY SEEDING
	(PS)	PERMANENT SEEDING
	(BM)	BLANKET MATTING
		LIMITS OF DISTURBANCE
		DIVERSION
	(SFO)	SILT FENCE OUTLET
		DRAINAGE AREA BOUNDARY
		DIVERSION BOUNDARY
		"J-HOOK" SILT FENCE

EROSION AND SEDIMENT CONTROL NOTES

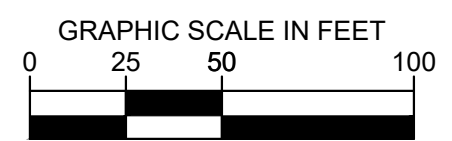
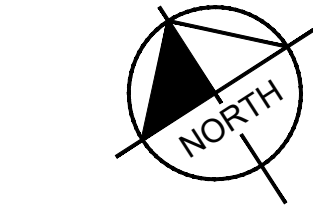
1. SEE SHEETS CV-101 - CV-106 FOR DEMOLITION PLAN.
2. SEE SHEETS CE THROUGH CE-504 FOR EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.
3. SEE SHEETS CP-501 AND CP-502 FOR PLANTING BED AND SODDING DETAILS.
4. TEMPORARY SEEDING SHOULD BE PLACED IN ALL DISTURBED AREAS.
5. SEE TABLES ON SHEET CE-503 FOR SEDIMENT BASIN AND SEDIMENT TRAP DETAILS.
6. SEE SHEET CE-501 FOR PHASE I PROBABLE CONSTRUCTION SEQUENCE.
7. SEE SHEET CE-503 FOR DIVERSION CALCULATIONS. CONTRACTOR TO INSTALL CHANNEL LININGS AS NOTED IN THE "PHASE I &S DITCH DESIGN SUMMARY TABLE" ON SHEET CE-503.
8. FLOW PATHS HAVE BEEN PROVIDED FOR AREAS DRAINING TO SUPER SILT FENCE TO DEMONSTRATE COMPLIANCE WITH TABLE C-PCM-04-2 OF THE 2024 VIRGINIA STORMWATER MANAGEMENT HANDBOOK.
9. PORTIONS OF LOD OUTSIDE A PERIMETER CONTROL SHALL BE STAKED AND MARKED WITH FLAGS SO CONTRACTOR DOES NOT PERFORM WORK OUTSIDE OF LOD.
10. SILT FENCE TO BE UTILIZED ON THE LOW SIDE OF ALL 20' WIDE SECURITY FENCE INSTALLATION LOD CORRIDOR, WITH PORTIONS OF SILT FENCE INSTALLED PRIOR TO FENCE INSTALLATION, THEN REMOVED ONCE STABILIZED AND PERMANENT SEEDING APPLIED. WATER TO SHEET FLOW ACROSS THE 20' INSTALLATION CORRIDOR TO THE MAXIMUM EXTENT PRACTICAL. CONTRACTOR TO WORK IN LIMITED SEGMENTS AT THE DISCRETION OF THE LOCAL &S INSPECTOR, WITH SUBSEQUENT SEGMENTS NOT INSTALLED UNTIL SECURITY FENCE IS INSTALLED. PORTION OF LOD IS TO BE RESEEDED AND CORRESPONDING SILT FENCE REMOVED. SEE SHEET CE-503 FOR TYPICAL DETAIL.





VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL		
	CE	CONSTRUCTION ENTRANCE
	SF	SILT FENCE
	SSF	SUPER SILT FENCE
	IP	INLET PROTECTION
	CIP	CULVERT INLET PROTECTION
	DD	DIVERSION DIKE
	FD	FILL DIVERSION
	ST	SEDIMENT TRAP
	SB	SEDIMENT BASIN
	OP	OUTLET PROTECTION
	CD	ROCK CHECK DAM
	TS	TEMPORARY SEEDING
	PS	PERMANENT SEEDING
	BM	BLANKET MATTING
		LIMITS OF DISTURBANCE
		DIVERSION
	SFO	SILT FENCE OUTLET
		DRAINAGE AREA BOUNDARY
		DIVERSION BOUNDARY
		"J-HOOK" SILT FENCE

- EROSION AND SEDIMENT CONTROL NOTES**
- SEE SHEETS CV-101 - CV-106 FOR DEMOLITION PLAN.
 - SEE SHEETS CE-100 THROUGH CE-504 FOR EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.
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KHA PROJECT	113706001
DATE	11/14/2025
SCALE	AS SHOWN
DESIGNED BY	STM
DRAWN BY	STM
CHECKED BY	JMM

PHASE I EROSION AND SEDIMENT CONTROL

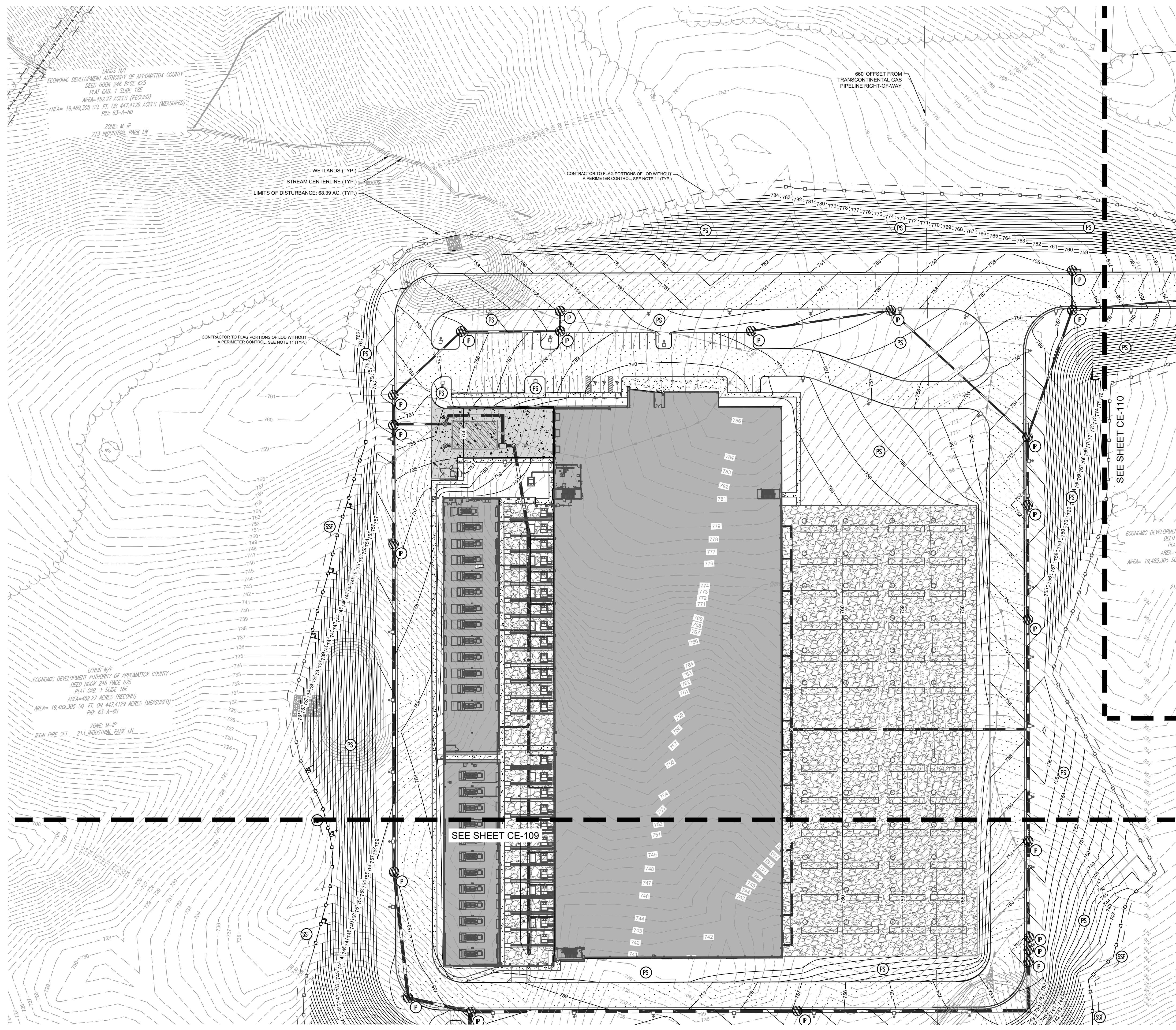
PROJECT HERCULES

SHEET NUMBER
CE-107

APPOMATTOX COUNTY

VA

Plotted By:McGray, Stephen Sheet Set:Kha Layout:CE-108 PHASE II EROSION AND SEDIMENT CONTROL November 06, 2023 01:26:55pm
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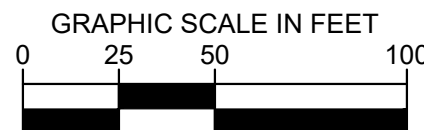
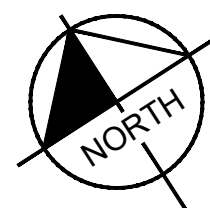


**VIRGINIA UNIFORM CODING SYSTEM
FOR EROSION AND SEDIMENT CONTROL**

- | | | |
|--|-------|-------------------------------|
| | CE | CONSTRUCTION ENTRANCE |
| | SF | SILT FENCE |
| | SSF | SUPER SILT FENCE |
| | IP | INLET PROTECTION |
| | CIP | CULVERT INLET PROTECTION |
| | DD | DIVERSION DIKE |
| | FD | FILL DIVERSION |
| | ST | SEDIMENT TRAP |
| | SB | SEDIMENT BASIN |
| | OP | OUTLET PROTECTION |
| | CD | ROCK CHECK DAM |
| | TS | TEMPORARY SEEDING |
| | PS | PERMANENT SEEDING |
| | BM | BLANKET MATTING |
| | | LIMITS OF DISTURBANCE |
| | SCC-V | STORMWATER CONVEYANCE CHANNEL |
| | | DRAINAGE AREA BOUNDARY |
| | | DIVERSION BOUNDARY |
| | | "J-HOOK" SILT FENCE |

EROSION AND SEDIMENT CONTROL NOTES

- SEE SHEETS CV-101 - CV-106 FOR DEMOLITION PLAN.
- SEE SHEETS CE-100 THROUGH CE-504 FOR EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.
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- AFTER CONSTRUCTION IS COMPLETE, TEMPORARY CONSTRUCTION AREAS ARE TO BE RESTORED TO THE EXISTING CONDITION PER THE RESTORATION SEQUENCE ON SHEET CG-501.
- SEE TABLES ON SHEET CE-503 FOR SEDIMENT BASIN AND SEDIMENT TRAP DETAILS.
- SEE SHEET CE-501 FOR PHASE II PROBABLE CONSTRUCTION SEQUENCE.
- SEE SHEET CG-503 FOR STORMWATER CONVEYANCE CHANNEL CALCULATIONS. CONTRACTOR TO INSTALL CHANNEL LININGS AS NOTED IN THE "PHASE II E&S AND POST DEVELOPMENT DITCH DESIGN SUMMARY TABLE" ON SHEET CG-503.
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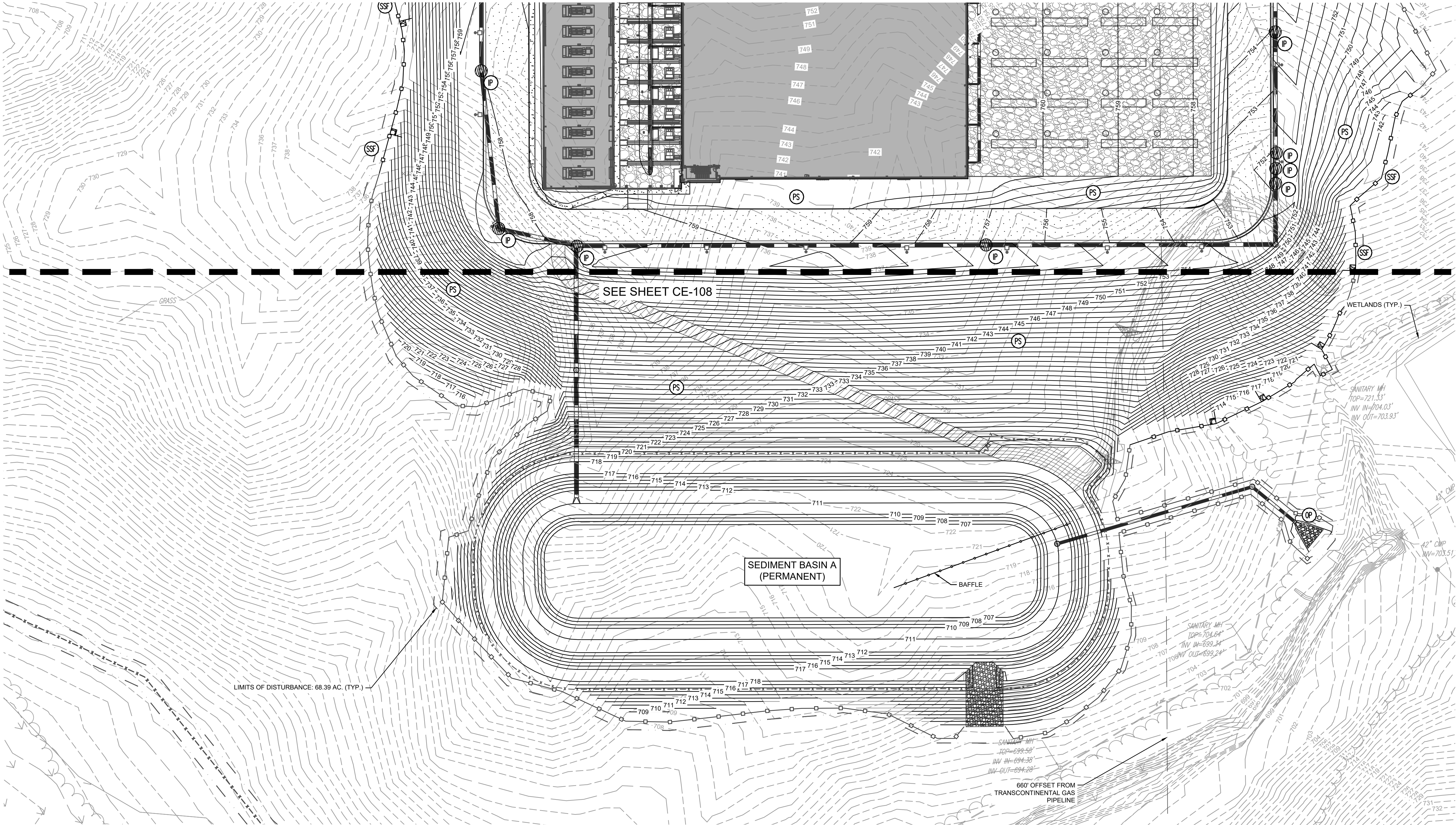
**PHASE II EROSION
AND SEDIMENT
CONTROL**

PROJECT HERCULES

SHEET NUMBER
CE-108

APPOMATTOX COUNTY VA

Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CE-109 PHASE II EROSION AND SEDIMENT CONTROL November 06, 2023 01:27:17pm
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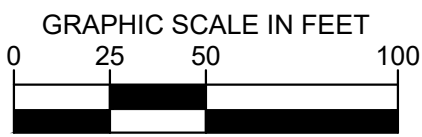
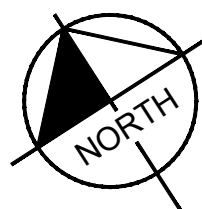


VIRGINIA UNIFORM CODING SYSTEM
FOR EROSION AND SEDIMENT CONTROL

	CE	CONSTRUCTION ENTRANCE
	SF	SILT FENCE
	SSF	SUPER SILT FENCE
	IP	INLET PROTECTION
	CIP	CULVERT INLET PROTECTION
	DD	DIVERSION DIKE
	FD	FILL DIVERSION
	ST	SEDIMENT TRAP
	SB	SEDIMENT BASIN
	OP	OUTLET PROTECTION
	CD	ROCK CHECK DAM
	TS	TEMPORARY SEEDING
	PS	PERMANENT SEEDING
	BM	BLANKET MATTING
		LIMITS OF DISTURBANCE
	SC-V	STORMWATER CONVEYANCE CHANNEL
		DRAINAGE AREA BOUNDARY
		DIVERSION BOUNDARY
		"J-HOOK" SILT FENCE

EROSION AND SEDIMENT CONTROL NOTES

- SEE SHEETS CV-101 - CV-106 FOR DEMOLITION PLAN.
- SEE SHEETS CE-100 THROUGH CE-504 FOR EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.
- SEE SHEETS CP-501 AND CP-502 FOR PLANTING BED AND SODDING DETAILS.
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- AFTER CONSTRUCTION IS COMPLETE, TEMPORARY CONSTRUCTION AREAS ARE TO BE RESTORED TO THE EXISTING CONDITION PER THE RESTORATION SEQUENCE ON SHEET CG-501.
- SEE TABLES ON SHEET CE-503 FOR SEDIMENT BASIN AND SEDIMENT TRAP DETAILS.
- SEE SHEET CE-501 FOR PHASE II PROBABLE CONSTRUCTION SEQUENCE.
- SEE SHEET CG-503 FOR STORMWATER CONVEYANCE CHANNEL CALCULATIONS. CONTRACTOR TO INSTALL CHANNEL LININGS AS NOTED IN THE "PHASE II E&S AND POST DEVELOPMENT DITCH DESIGN SUMMARY TABLE" ON SHEET CG-503.
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PHASE II EROSION
AND SEDIMENT
CONTROL

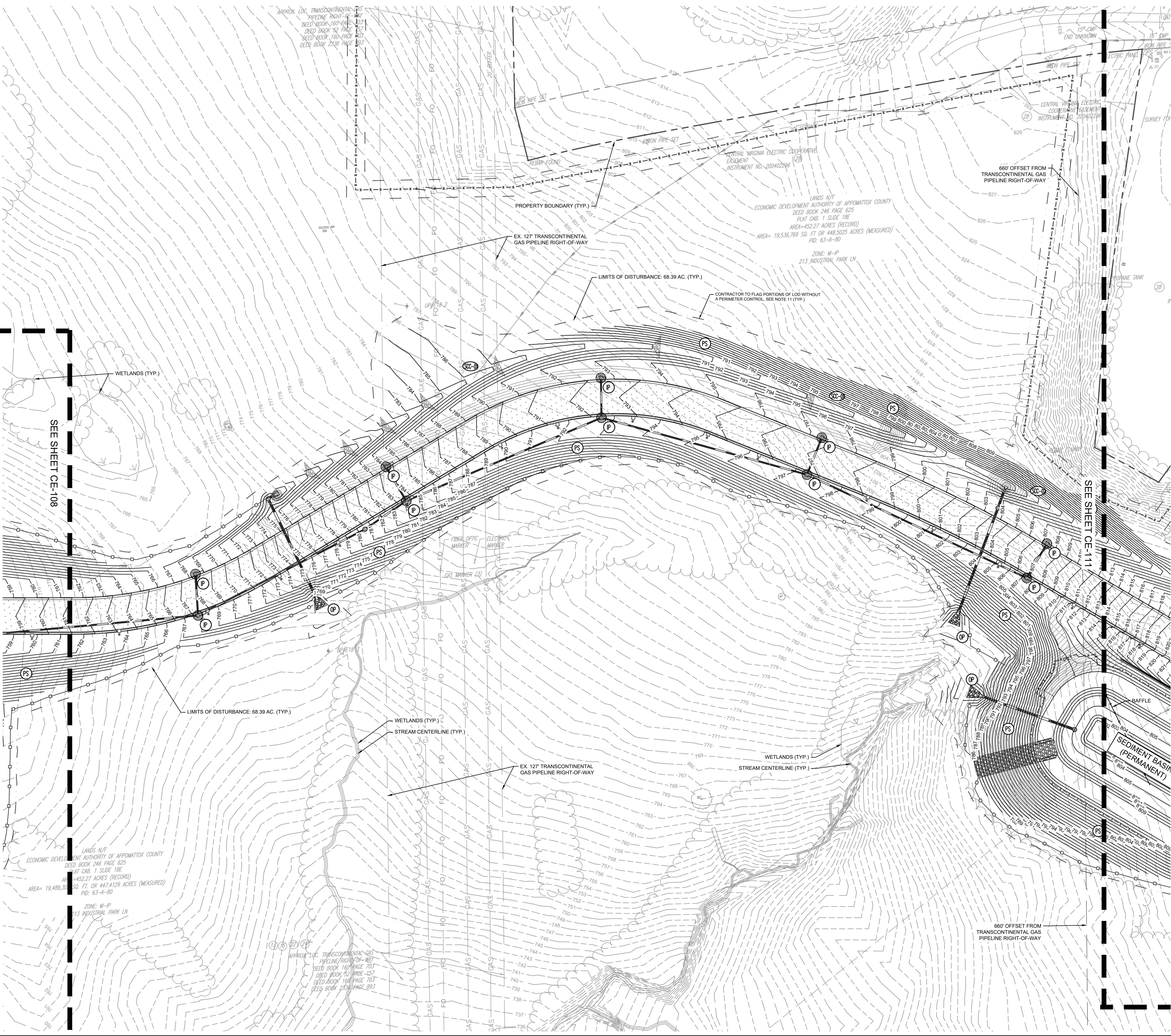
PROJECT HERCULES

VA

APPOMATTOX COUNTY

SHEET NUMBER
CE-109

Plotted By:McGray, Stephen Sheet Set:Kha Layout:CE-110 PHASE II EROSION AND SEDIMENT CONTROL November 06, 2023 01:27:37pm
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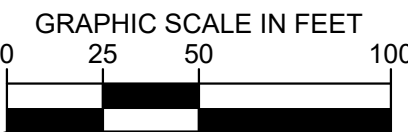
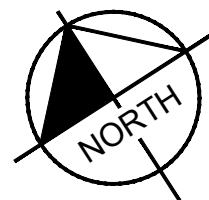


**VIRGINIA UNIFORM CODING SYSTEM
FOR EROSION AND SEDIMENT CONTROL**

	CE	CONSTRUCTION ENTRANCE
	SF	SILT FENCE
	SSF	SUPER SILT FENCE
	IP	INLET PROTECTION
	CIP	CULVERT INLET PROTECTION
	DD	DIVERSION DIKE
	FD	FILL DIVERSION
	ST	SEDIMENT TRAP
	SB	SEDIMENT BASIN
	OP	OUTLET PROTECTION
	CD	ROCK CHECK DAM
	TS	TEMPORARY SEEDING
	PS	PERMANENT SEEDING
	BM	BLANKET MATTING
		LIMITS OF DISTURBANCE
	SCC-VX	STORMWATER CONVEYANCE CHANNEL
		DRAINAGE AREA BOUNDARY
		DIVERSION BOUNDARY
		"J-HOOK" SILT FENCE

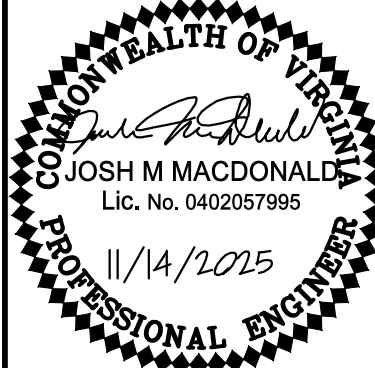
EROSION AND SEDIMENT CONTROL NOTES

- SEE SHEETS CV-101 - CV-106 FOR DEMOLITION PLAN.
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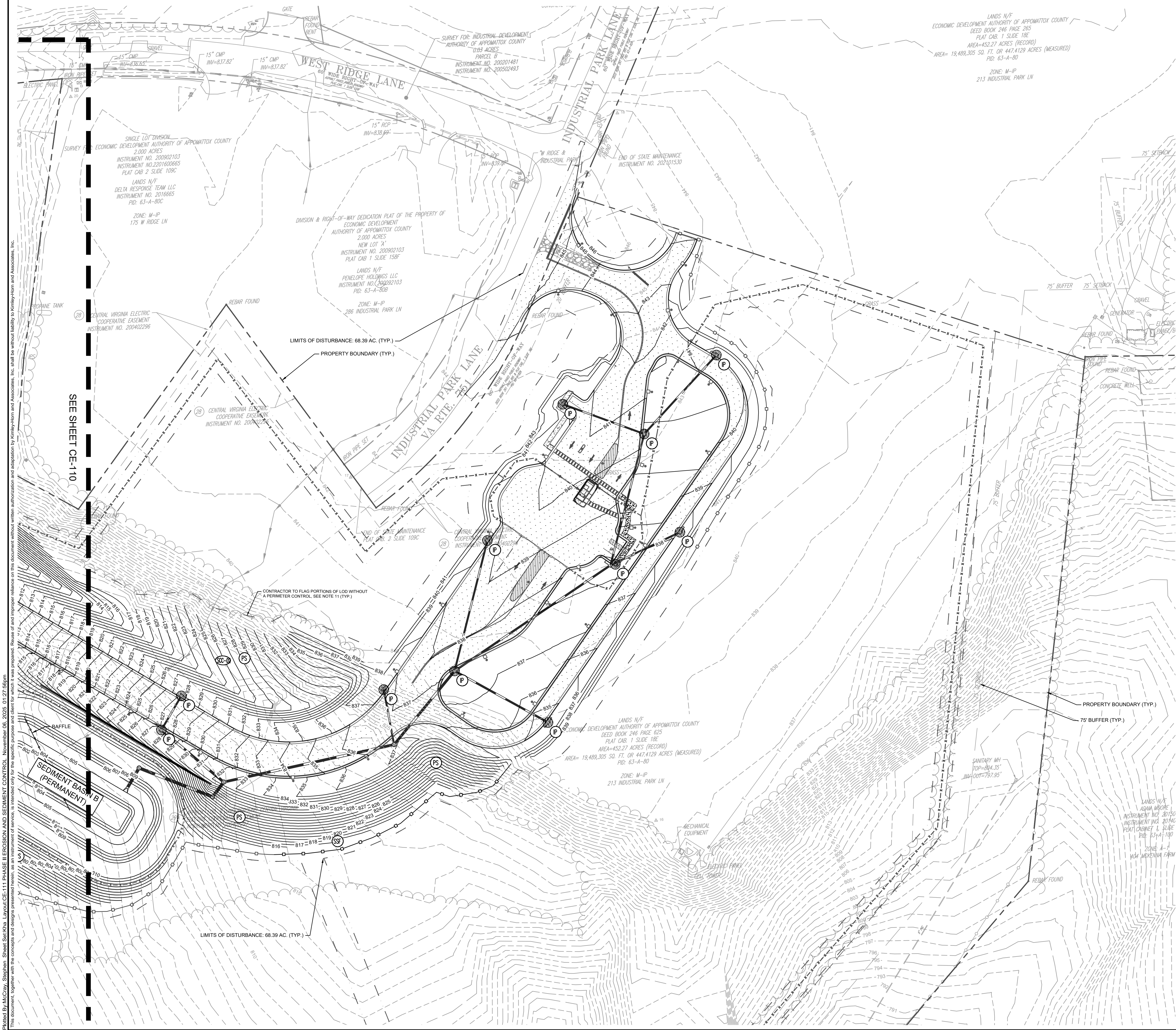
**PHASE II EROSION
AND SEDIMENT
CONTROL**

PROJECT HERCULES

VA

APPOMATTOX COUNTY

SHEET NUMBER
CE-110

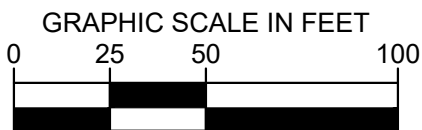
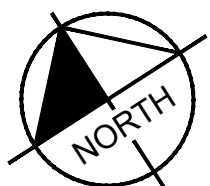


VIRGINIA UNIFORM CODING SYSTEM
FOR EROSION AND SEDIMENT CONTROL

	CE	CONSTRUCTION ENTRANCE
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	SSF	SUPER SILT FENCE
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	DD	DIVERSION DIKE
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- SEE SHEET CG-503 FOR STORMWATER CONVEYANCE CHANNEL CALCULATIONS. CONTRACTOR TO INSTALL CHANNEL LININGS AS NOTED IN THE "PHASE II E&S AND POST DEVELOPMENT DITCH DESIGN SUMMARY TABLE" ON SHEET CG-503.
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Jacobs

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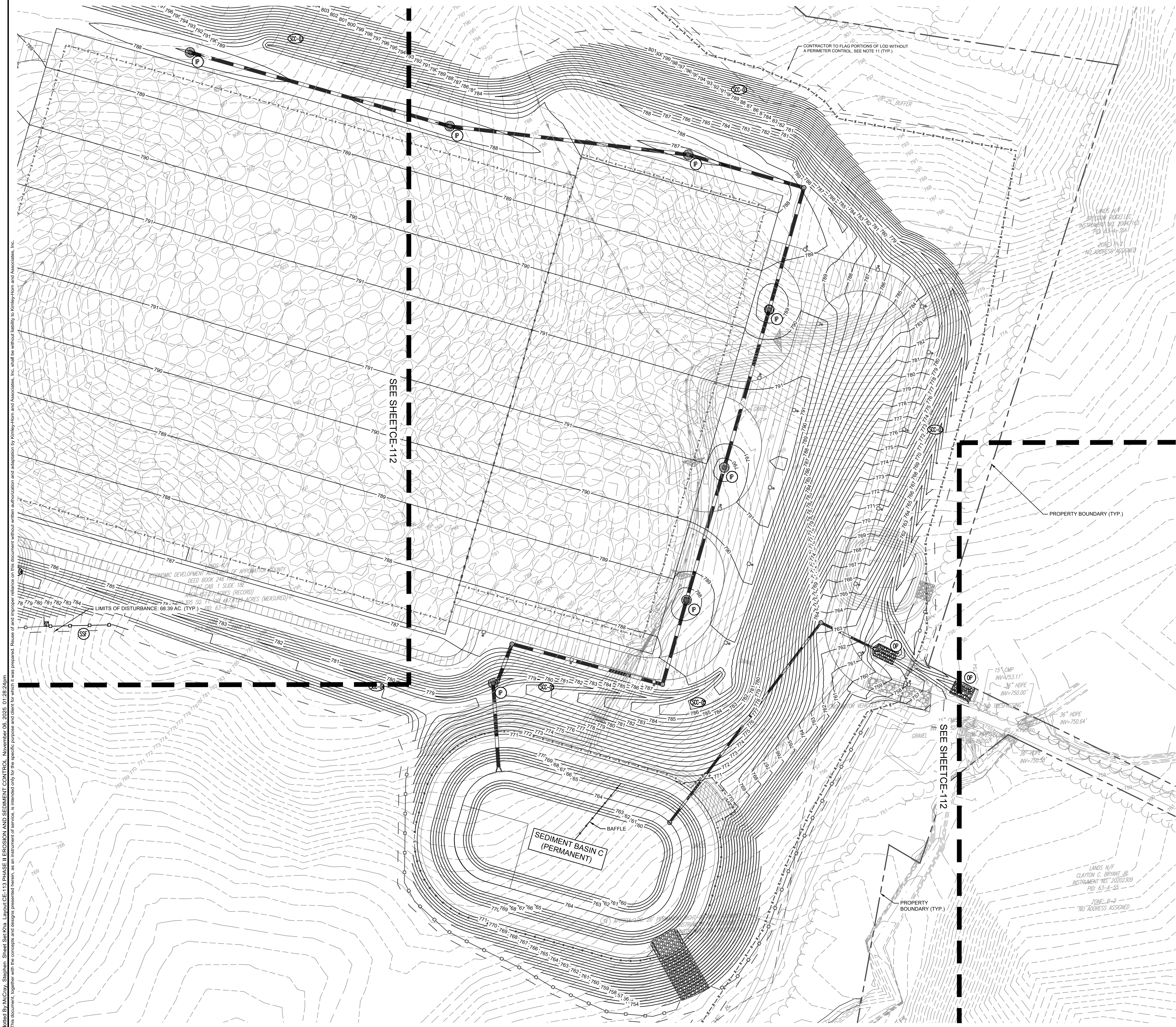


KHA PROJECT	113706001
DATE	11/14/2025
SCALE	AS SHOWN
DESIGNED BY	STM
DRAWN BY	STM
CHECKED BY	JMM

PHASE II EROSION
AND SEDIMENT
CONTROL

PROJECT HERCULES

SHEET NUMBER
CE-111

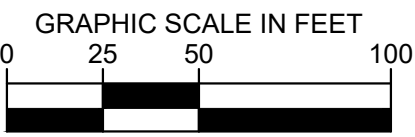
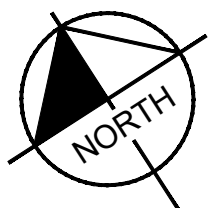


**VIRGINIA UNIFORM CODING SYSTEM
FOR EROSION AND SEDIMENT CONTROL**

	CE	CONSTRUCTION ENTRANCE
	SF	SILT FENCE
	SSF	SUPER SILT FENCE
	IP	INLET PROTECTION
	CIP	CULVERT INLET PROTECTION
	DD	DIVERSION DIKE
	FD	FILL DIVERSION
	ST	SEDIMENT TRAP
	SB	SEDIMENT BASIN
	OP	OUTLET PROTECTION
	CD	ROCK CHECK DAM
	TS	TEMPORARY SEEDING
	PS	PERMANENT SEEDING
	BM	BLANKET MATTING
		LIMITS OF DISTURBANCE
	SCC-VX	STORMWATER CONVEYANCE CHANNEL
		DRAINAGE AREA BOUNDARY
		DIVERSION BOUNDARY
		"J-HOOK" SILT FENCE

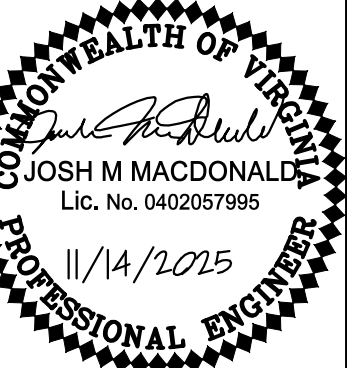
EROSION AND SEDIMENT CONTROL NOTES

- SEE SHEETS CV-101 - CV-106 FOR DEMOLITION PLAN.
- SEE SHEETS CE-100 THROUGH CE-504 FOR EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.
- SEE SHEETS CP-501 AND CP-502 FOR PLANTING BED AND SODDING DETAILS.
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- PRIOR TO SEDIMENT TRAP OR BASIN REMOVAL, GRADING MUST BE COMPLETED SUCH THAT DRAINAGE AREAS PREVIOUSLY DRAINING TO TRAPS OR BASINS WILL DRAIN POSITIVELY TO ANOTHER BMP.
- AFTER CONSTRUCTION IS COMPLETE, TEMPORARY CONSTRUCTION AREAS ARE TO BE RESTORED TO THE EXISTING CONDITION PER THE RESTORATION SEQUENCE ON SHEET CG-501.
- SEE TABLES ON SHEET CE-503 FOR SEDIMENT BASIN AND SEDIMENT TRAP DETAILS.
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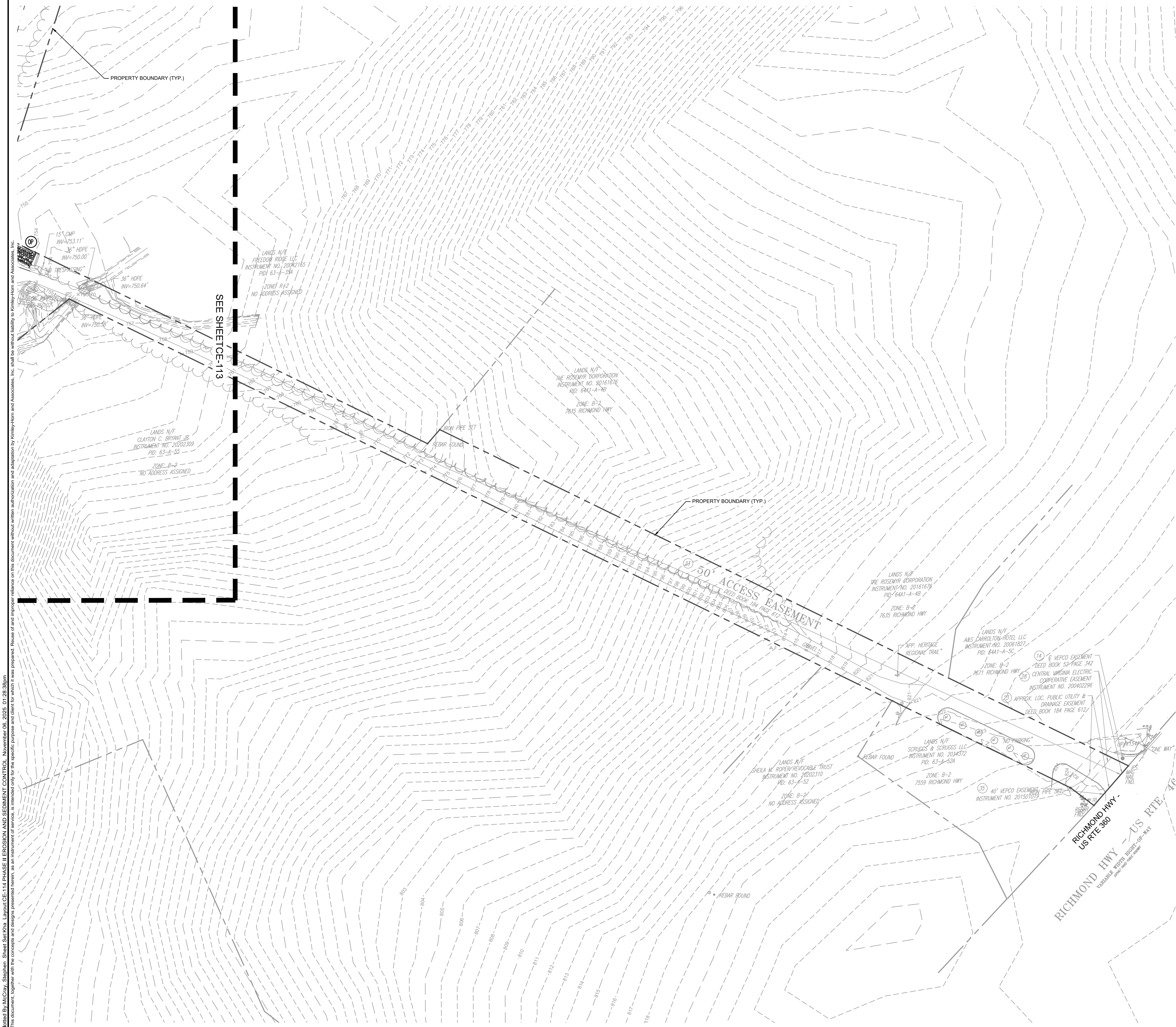


KHA PROJECT	113706001
DATE	11/14/2025
SCALE	AS SHOWN
DESIGNED BY	STM
DRAWN BY	STM
CHECKED BY	JMM

**PHASE II EROSION
AND SEDIMENT
CONTROL**

PROJECT HERCULES
VA
APPOMATTOX COUNTY

SHEET NUMBER
CE-113

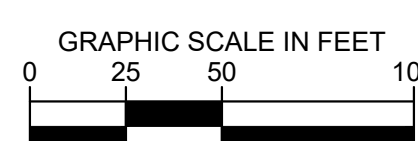
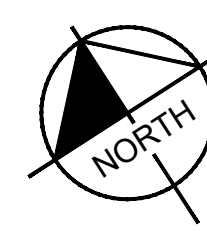


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FOR EROSION AND SEDIMENT CONTROL**

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EROSION AND SEDIMENT CONTROL NOTES

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PROJECT HERCULES

SHEET NUMBER
CE-114

**PHASE II EROSION
AND SEDIMENT
CONTROL**

APPOMATTOX COUNTY

VA

PROFESSIONAL ENGINEER

JOSH M MACDONALD
Lic. No. 0402057995
11/14/2025

KHA PROJECT	113706001
DATE	11/14/2025
SCALE	AS SHOWN
DESIGNED BY	STM
DRAWN BY	STM
CHECKED BY	JMM

Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CE-501 EROSION CONTROL NARRATIVE November 05, 2025 04:22:40pm
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PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF IMPROVEMENTS ASSOCIATED WITH A NEW DATA HUB TO BE LOCATED IN APPOMATTOX COUNTY, VIRGINIA. THE SITE AREA IS 452.27 ACRES (RECORD), AND THE DISTURBED AREA IS 68.39 AC.

PROPOSED IMPROVEMENTS INCLUDE A DATA CENTER BUILDING AND SUBSTATION WITH ASSOCIATED DRIVE AISLES, PERIMETER FENCE, PARKING AREAS, CURBING, WATER AND SEWER SYSTEMS, AND STORM DRAINAGE SYSTEMS. SITE WORK INCLUDES CLEARING AND GRADING, UTILITY INSTALLATIONS, PAVING, AND LANDSCAPING.

ACCESS TO THE BUILDING PAD WILL BE PROVIDED FROM A PROPOSED ENTRANCE ON INDUSTRIAL PARK ROAD ON THE NORTHERN SIDE OF THE SITE. ACCESS TO THE SOUTHEAST SUBSTATION PAD WILL BE PROVIDED OFF OF ROUTE 460 THROUGH AN EXISTING ACCESS DRIVE.

EXISTING SITE CONDITIONS

CURRENTLY, THE SITE IS UNDEVELOPED. THE MAJORITY OF THE EXISTING SITE IS FORESTED/OPEN SPACE, PASTURE, AND MANAGED TURF.

EXISTING ELEVATIONS RANGE FROM APPROXIMATELY 700 FEET TO 850 FEET WITH RELATIVELY STEEP SLOPES THROUGHOUT THE CENTER OF THE PROPERTY. THE EXISTING SITE IS LESS THAN 1% IMPERVIOUS WITH TYPE B, C, AND D SOILS. CURRENTLY, THE MAJORITY OF THE SITE COLLECTS INTO STREAMS AND WETLANDS IN THE CENTER OF THE PROPERTY WHICH DRAIN WEST TOWARDS A FLOODPLAIN.

ADJACENT AREAS

THE SUBJECT SITE IS BORDERED BY OAKVILLE ROAD TO THE NORTHEAST, WEST RIDGE LANE TO THE NORTH, APPOMATTOX COUNTY LAND TO THE WEST, POLICE TOWER ROAD TO THE SOUTHWEST, AND RESIDENTIAL TO THE SOUTHEAST.

OFF-SITE AREAS

OFF-SITE LAND DISTURBANCE IS LIMITED TO UTILITY CONNECTIONS AND CURB TIE-INS ALONG INDUSTRIAL PARK ROAD.

SOILS

FOR DETAILED SOILS INFORMATION, REFER TO THE THE FINAL GEOTECHNICAL REPORT (CURRENTLY BEING PREPARED BY ECS.)

CRITICAL AREAS

WETLANDS AND STREAMS ARE PRESENT ON SITE BUT ARE NOT TO BE IMPACTED.

PERMANENT STABILIZATION

PERMANENT STABILIZATION SHALL BE PROVIDED BY THE SITE CONTRACTOR AND WILL BE ACHIEVED WITH SEEDING OR SODDING AS SHOWN ON THE LANDSCAPING PLAN SHEET FOR ALL VEGETATED AREAS. CONCRETE, PAVEMENT, AND OTHER IMPERVIOUS SURFACES WILL STABILIZE THE REMAINDER OF THE SITE.

SOIL STOCKPILE NOTE

APPROXIMATE STOCKPILE AREAS HAVE BEEN DESIGNATED ON SHEETS CE-101 THROUGH CE-107.

STOCKPILING - TOPSOIL. SHALL BE STOCKPILED IN SUCH A MANNER THAT NATURAL DRAINAGE IS NOT OBSTRUCTED AND NO OFF-SITE SEDIMENT DAMAGE SHALL RESULT. STABILIZE OR PROTECT STOCKPILES IN ACCORDANCE WITH MINIMUM STANDARD #2. THE SIDE SLOPES OF THE STOCKPILE SHALL NOT EXCEED 2H:1V. PERIMETER CONTROLS MUST BE PLACED AROUND THE STOCKPILE IMMEDIATELY. SEEDING OF STOCKPLES SHALL BE COMPLETED WITHIN 7 DAYS OF THE FORMATION OF THE STOCKPILE. IN ACCORDANCE WITH STD. AND SPEC. C-SSM-09 (TEMPORARY SEEDING); IF IT IS TO REMAIN DORMANT FOR LONGER THAN 14 DAYS (REFER TO MINIMUM STANDARD #1 AND #2).

MAINTENANCE

BETWEEN THE TIME THE EROSION CONTROL PLAN IS IMPLEMENTED AND FINAL SITE STABILIZATION IS ACHIEVED, ALL DISTURBED AREAS AND EROSION CONTROLS MUST BE INSPECTED AT LEAST ONCE EVERY 5 BUSINESS DAYS, OR AT LEAST ONCE EVERY 10 BUSINESS DAYS AND NO LATER THAN 24 HOURS FOLLOWING A MEASURABLE STORM EVENT.

EXAMPLES OF PARTICULAR ITEMS TO BE EVALUATED DURING SITE INSPECTIONS ARE LISTED BELOW. THIS LIST IS NOT INTENDED TO BE COMPREHENSIVE. DURING EACH INSPECTION, EACH INSPECTOR MUST EVALUATE OVERALL EROSION CONTROL, SYSTEM PERFORMANCE, AS WELL AS THE EFFECTIVENESS OF SYSTEM COMPONENTS. ADDITIONAL FACTORS SHOULD BE CONSIDERED AS APPROPRIATE TO THE CIRCUMSTANCES.

- LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE MUST BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. A STABILIZED CONSTRUCTION ENTRANCE WILL BE CONSTRUCTED WHERE VEHICLES ENTER AND EXIT. THIS ENTRANCE WILL BE MAINTAINED OR SUPPLEMENTED AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE ON VEHICLES. SEDIMENT TRACKED ONTO PUBLIC ROADWAYS MUST BE SHOVELED OR SWEEP FROM THE ROADWAY AND RE-DEPOSITED ON SITE IN A MANNER THAT MINIMIZES ITS OFFSITE RELEASE POTENTIAL.
- SEDIMENT BARRIERS MUST BE INSPECTED AND, IF NECESSARY, THEY MUST BE ENLARGED OR CLEANED IN ORDER TO PROVIDE ADDITIONAL CAPACITY. ALL MATERIAL EXCAVATED FROM BEHIND SEDIMENT BARRIERS SHALL BE STOCKPILED ON THE UP SLOPE SIDE OF THE BARRIER. ADDITIONAL SEDIMENT BARRIERS MUST BE CONSTRUCTED AS NEEDED.
- INSPECTIONS WILL EVALUATE DISTURBED AREAS AND AREAS USED FOR STORING MATERIALS THAT ARE EXPOSED TO RAINFALL FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. IF NECESSARY, THE MATERIALS MUST BE COVERED OR ORIGINAL COVERS MUST BE REPAIRED OR SUPPLEMENTED. ALSO, PROTECTIVE BERMS MUST BE CONSTRUCTED, IF NEEDED, IN ORDER TO CONTAIN RUNOFF FROM MATERIAL STORAGE AREAS.
- GRASSSED AREAS WILL BE INSPECTED TO CONFIRM THAT A HEALTHY STAND OF GRASS IS MAINTAINED. THE SITE HAS ACHIEVED FINAL STABILIZATION WHEN TURF GRASS COVER PROVIDES PERMANENT STABILIZATION OF THE SOIL SURFACE EXCLUSIVE OF AREAS THAT HAVE BEEN PAVED OR COVERED BY BUILDING(S). PERMANENT STABILIZATION IS NOT CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.
- ALL DISCHARGE POINTS MUST BE INSPECTED TO DETERMINE WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING IMPACTS TO RECEIVING WATERS.

BASED UPON THE RESULTS OF THE INSPECTIONS, EACH EROSION AND SEDIMENT CONTROL MEASURE SHALL BE REPAIRED AND/OR MAINTAINED IN ACCORDANCE WITH THE MAINTENANCE REQUIREMENTS SPECIFIED IN THE CORRESPONDING SECTION OF THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK. THE CONTRACTOR SHALL MAINTAIN A COPY OF THIS HANDBOOK ON SITE AT ALL TIMES DURING CONSTRUCTION.

EROSION CONTROL MEASURES

THE FOLLOWING EROSION CONTROL MEASURES AS SHOWN ON THE EROSION CONTROL PLAN SHEET(S) OF THE SITE PLAN WILL BE USED FOR THIS PROJECT:

C-PCM-01 SAFETY FENCE - SAFETY FENCE WILL BE INSTALLED AROUND THE PERIMETER OF THE SITE. THE PURPOSE OF THIS PRACTICE IS TO PREVENT UNDESIRABLE ACCESS AND USE OF AN EROSION CONTROL DEVICE BY THE PUBLIC.

C-SCM-03 TEMPORARY STONE CONSTRUCTION ENTRANCE - A STABILIZED STONE PAD WITH A FILTER FABRIC UNDERLINER WILL BE PROVIDED AT THE PRIMARY CONSTRUCTION ACCESS POINT. THE PURPOSE OF THIS PRACTICE IS TO REDUCE THE AMOUNT OF MUD TRANSPORTED ONTO PAVED PUBLIC ROADS BY MOTOR VEHICLES OR RUNOFF. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND REWORKING OF EXISTING STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED ONTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.

C-PCM-04 SILT FENCE - A TEMPORARY SEDIMENT BARRIER CONSISTING OF A SYNTHETIC FILTER FABRIC STRETCHED ACROSS AND ATTACHED TO SUPPORTING POSTS AND ENTRENCHED WILL BE PROVIDED AROUND MUCH OF THE SITE PERIMETER AND PARALLEL TO SLOPED AREAS. THE PURPOSE OF THIS PRACTICE IS TO INTERCEPT AND DETAIN SMALL AMOUNTS OF SEDIMENT FROM DISTURBED AREAS DURING CONSTRUCTION OPERATIONS IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM END RUNS AND UNDERCUTTING. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

SUPER SILT FENCE - A TEMPORARY SEDIMENT BARRIER CONSISTING OF A CHAIN LINK FENCE WITH A LAYER OF FILTER FABRIC ATTACHED AND ENTRENCHED, PLEASE REFER TO THE DETAIL ON SHEET CE-502.

C-SCM-04 STORM DRAIN INLET PROTECTION - A SEDIMENT FILTER OR AN EXCAVATED IMPOUNDING AREA AROUND A STORM DRAIN DROP INLET OR CURB INLET WILL BE PROVIDED AT ALL INLET LOCATIONS WITHIN THE LIMITS OF DISTURBANCE. THE PURPOSE OF THIS PRACTICE IS TO PREVENT SEDIMENT FROM ENTERING STORM DRAINAGE SYSTEMS PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED AREA. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

C-SCM-05 CULVERT INLET PROTECTION - A SEDIMENT FILTER LOCATED AT THE INLET TO STORM SEWER CULVERTS THE PURPOSE OF THIS PRACTICE IS TO PREVENT SEDIMENT FROM ENTERING IN, ACCUMULATING IN AND BEING TRANSFERRED BY A CULVERT AND ASSOCIATED DRAINAGE SYSTEM PRIOR TO PERMANENT STABILIZATION OF A DISTURBED PROJECT AREA. IT CAN ALSO BE USED TO PROVIDE EROSION CONTROL AT CULVERT INLETS DURING THE PHASE OF A PROJECT WHERE ELEVATION AND DRAINAGE PATTERNS CHANGE, CAUSING ORIGINAL CONTROL MEASURES TO BE INEFFECTIVE OR IN NEED OF REMOVAL.

CE-SCM-06 TEMPORARY DIVERSION DIKE - AN EARTHEN BERM CONSTRUCTED ALONG A SLOPE TO DIVERT WATER INTO OR AWAY FROM SEDIMENT TREATMENT DEVICES. DIVERSION DIKES SERVE TO COLLECT SEDIMENT LADEN WATER AND DIRECT IT TO APPROPRIATE SEDIMENT TRAPS OR BASINS, AS WELL AS TO PREVENT CLEAN OFFSITE WATER FROM RUNNING OVER DISTURBED AREA AND BECOMING SEDIMENT LADEN.

CE-SCM-05 DIVERSION - A CHANNEL CONSTRUCTED ACROSS A SLOPE WITH A SUPPORTING EARTHEN RIDGE ON THE LOWER SIDE. THE PURPOSE OF THIS PRACTICE IS TO REDUCE SLOPE LENGTH AND TO INTERCEPT AND DIVERT STORMWATER RUNOFF TO STABILIZED OUTLETS AT NON-EROSIVE VELOCITIES.

CE-SCM-06 TEMPORARY FILL DIVERSION - A CHANNEL WITH A SUPPORTING RIDGE OF SOIL ON THE LOWER SIDE, CONSTRUCTED ALONG THE TOP OF AN ACTIVE EARTH FILL. TEMPORARY FILL DIVERSIONS ARE USED TO DIVERT STORM RUNOFF AWAY FROM THE UNPROTECTED SLOPE OF THE FILL TO A STABILIZED OUTLET OR SEDIMENT TRAPPING FACILITY.

C-SCM-11 SEDIMENT TRAP - A TEMPORARY PONDING AREA FORMED BY CONSTRUCTING AN EARTHEN EMBANKMENT WITH A STONE OUTLET. THE PURPOSE IS TO DETAIN SEDIMENT-LADEN RUNOFF FROM SMALL DISTURBED AREAS LONG ENOUGH TO ALLOW THE MAJORITY OF THE SEDIMENT TO SETTLE OUT.

C-SCM-12 SEDIMENT BASIN - SEDIMENT BASINS FUNCTION TO DETAIN SEDIMENT LADEN RUNOFF FROM DISTURBED AREAS IN WET AND DRY STORAGE LONG ENOUGH TO ALLOW THE MAJORITY OF SEDIMENT TO SETTLE OUT.

CE-SCM-15 OUTLET PROTECTION - STRUCTURALLY LINED APRONS OR OTHER ACCEPTABLE ENERGY DISSIPATING DEVICES PLACED AT THE OUTLETS OF PIPES OR PAVED CHANNEL SECTIONS. THE PURPOSE IS TO PREVENT SCOUR AT STORMWATER OUTLETS, TO PROTECT THE OUTLET STRUCTURE, AND TO MINIMIZE THE POTENTIAL FOR DOWNSTREAM EROSION BY REDUCING THE VELOCITY AND ENERGY OF CONCENTRATED STORMWATER FLOWS.

C-SCM-07 ROCK CHECK DAM - SMALL TEMPORARY STONE DAMS CONSTRUCTED ACROSS A SWALE OR DRAINAGE DITCH. THE PURPOSE IS TO REDUCE THE VELOCITY OF CONCENTRATED STORMWATER FLOWS, THEREBY REDUCING EROSION OF THE SWALE OR DITCH. THIS PRACTICE ALSO TRAPS SEDIMENT GENERATED FROM ADJACENT AREAS OR THE DITCH ITSELF, MAINLY BY PONDING OF THE STORMWATER RUNOFF. FIELD EXPERIENCE HAS SHOWN IT TO PERFORM MORE EFFECTIVELY THAN SILT FENCE OR STRAW BALES IN THE EFFORT TO STABILIZE "WET-WEATHER" DITCHES.

C-SSM-09 TEMPORARY SEEDING - THE ESTABLISHMENT OF A TEMPORARY VEGETATIVE COVER ON DISTURBED AREAS BY SEEDING WITH APPROPRIATE RAPIDLY GROWING ANNUAL PLANTS WILL BE PROVIDED ON ALL DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE WITHIN 14 DAYS. TEMPORARY SEEDING SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN LONGER THAN 14 DAYS AS PER MS-1. THE PURPOSE OF THIS PRACTICE IS TO PROVIDE PROTECTION TO BARE SOILS EXPOSED DURING CONSTRUCTION UNTIL PERMANENT VEGETATION OR OTHER EROSION CONTROL MEASURES CAN BE ESTABLISHED.

C-SSM-10 PERMANENT SEEDING - THE ESTABLISHMENT OF PERENNIAL VEGETATIVE COVER ON DISTURBED AREAS BY PLANTING SEED WILL BE PROVIDED AS SHOWN ON THE LANDSCAPING PLAN. PERMANENT SEEDING SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED AS PER MS-1. THE PURPOSE OF THIS PRACTICE IS TO REDUCE EROSION AND DECREASE SEDIMENT YIELD FROM DISTURBED AREAS AND TO PERMANENTLY STABILIZE DISTURBED AREAS IN A MANNER THAT IS ECONOMICALLY ADAPTABLE TO SITE CONDITIONS, AND ALLOWS SELECTION OF THE MOST APPROPRIATE PLANT MATERIALS.

C-SSM-05 SODDING. STABILIZATION OF FINE-GRADED DISTURBED AREAS BY ESTABLISHING PERMANENT GRASS STANDS WITH SOD WILL BE PROVIDED FOR ALL AREAS ON-SITE AS SHOWN ON THE LANDSCAPING PLAN. THE PURPOSE OF THIS PRACTICE IS TO ESTABLISH PERMANENT TURF IMMEDIATELY AND TO PREVENT EROSION AND DAMAGE FROM SEDIMENT AND RUNOFF BY STABILIZING THE SOIL SURFACE.

C-SSM-05 SOIL STABILIZATION BLANKET AND MATTING - TO BE INSTALLED AS DENOTED ON THE PLANS. THE PURPOSE IS TO AID IN CONTROLLING EROSION ON CRITICAL AREAS BY PROVIDING A MICROCLIMATE WHICH PROTECTS YOUNG VEGETATION AND PROMOTES ITS ESTABLISHMENT.

C-SSM-01 TREE PROTECTION. PROTECTION OF DESIRABLE TREES FROM MECHANICAL AND OTHER INJURY DURING LAND DISTURBING AND CONSTRUCTION ACTIVITY. ENSURE THE SURVIVAL OF DESIRABLE TREES WHERE THEY WILL BE EFFECTIVE FOR EROSION AND SEDIMENT CONTROL, WATERSHED PROTECTION, LANDSCAPE BEAUTIFICATION, DUST AND POLLUTION CONTROL, NOISE REDUCTION, SHADE AND OTHER ENVIRONMENTAL BENEFITS WHILE THE LAND IS BEING CONVERTED FROM FOREST TO URBAN-TYPE USES.

MS-19 MINIMUM STANDARDS

MS-1 PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

MS-2 DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICATION OF THIS PRACTICE IS TO REDUCE THE POTENTIAL FOR PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

MS-3 A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.

MS-4 SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

MS-5 STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

MS-6 SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.

MS-7 CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.

MS-8 CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.

MS-9 WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.

MS-10 ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

MS-11 BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.

MS-12 WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND OFFEREDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.

MS-13 WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.

MS-14 ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.

MS-15 THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.

MS-16 UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

- NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
- EXCAVATED MATERIAL SHALL BE PLACED ON THE UPSIDE SIDE OF TRENCHES.
- EFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
- MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
- RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER.
- APPLICABLE SAFETY REQUIREMENTS SHALL BE COMPLIED WITH.

MS-17 WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.

MS-18 ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE VESCP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

MS-19 PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS:

A. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.

- ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:
 - THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR
 - (2)A NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS.
 - (3)ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND
 - (4)PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.

- IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:
 - (I)IMPROVE EXISTING CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO CHANNEL THE BED OR BANKS; OR
 - (2)IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES;
 - (3)DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL, OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MANMADE CHANNEL. OR
 - (4)PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESCP AUTHORITY TO PREVENT DOWNSTREAM EROSION.

D. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.

E. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT.

F. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE VESCP OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.

G. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.

H. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.

I. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY.

J. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.

K. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE.

L. ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO (I) DETAIN THE WATER QUANTITY VOLUME AND TO RELEASE IT OVER 48 HOURS; (II) DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE-YEAR, 24-HOUR STORM; AND (III) REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5, 2, AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO § 62-14.4, 15.54 OR 62-14.4, 15.65 OF THE ACT.

M. FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 62-14.4, 15.52 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (§62-14.4, 15.24 ET SEQ. OF THE CODE OF VIRGINIA) AND LAND-USE REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES ARE IN ACCORDANCE WITH 9VAC25-870-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSPM) PERMIT REGULATIONS.

N. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25-870-86 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSPM) PERMIT REGULATIONS SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF MINIMUM STANDARD 19.

PHASE I PROBABLE CONSTRUCTION SEQUENCE

- PRIOR TO PRE-CONSTRUCTION MEETING INSTALL SWPPP MAILBOX AND WETLAND/RPA BARRICADE BLACK AND YELLOW TAPE.
 - SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING. THE OWNER MUST GIVE THE COUNTY INSPECTOR AT LEAST 48 HOURS NOTIFICATION TO SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING FOR THE ISSUANCE OF A LAND DISTURBANCE PERMIT. THE CERTIFIED REGISTERED LAND DISTURBER (CRLD) MUST ATTEND THE MEETING. IF THE PROJECT DOES NOT COMMENCE FOR 180 DAYS AFTER THE PRE-CONSTRUCTION MEETING OR LIES DORMANT FOR MORE THAN 180 DAYS DURING CONSTRUCTION, A NEW PRE-CONSTRUCTION MEETINGS MUST BE SCHEDULED BEFORE CONSTRUCTION CAN BEGIN AGAIN.
 - THE VSPM CONSTRUCTION ACTIVITY OPERATOR, ENVIRONMENTAL INSPECTOR (OR AUTHORIZED REPRESENTATIVE), VDOT INSPECTOR (OR AUTHORIZED REPRESENTATIVE), AND DEQ INSPECTOR (OR AUTHORIZED REPRESENTATIVE) MUST ATTEND THE PRE-CONSTRUCTION MEETING.
 - IDENTIFY THE LIMITS OF DISTURBANCE WITH FLAGGING OR OTHER CLEARLY IDENTIFIABLE MEANS PRIOR TO LAND DISTURBANCE. NO DISTURBANCE, MATERIAL STORAGE, OR OTHER CONSTRUCTION ACTIVITIES ARE TO OCCUR OUTSIDE OF THESE DEMARCATED LIMITS OF DISTURBANCE.
 - CONTRACTOR TO INSTALL CONSTRUCTION ENTRANCE. CONTRACTOR TO KEEP EXISTING ROADS FREE OF MUD AND DEBRIS AT ALL TIMES.
 - PREPARE PARKING AND STORAGE AREAS AND INSTALL ANY DOWNSTREAM PERIMETER CONTROLS. UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, MASON'S AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS ETC., DENOTE THEM ON THE SITE MAPS IMMEDIATELY AND NOTE ANY CHANGES IN THE LOCATIONS AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.
 - CONTRACTOR TO INSTALL PERIMETER EROSION AND SEDIMENT CONTROLS, INCLUDING BUT NOT LIMITED TO: SILT FENCE, SUPER SILT FENCE, SILT FENCE OUTFALLS, CULVERT INLET PROTECTION, AND INLET PROTECTION.
 - CONTRACTOR TO CLEAR AND GRADE THE MINIMUM AREA NECESSARY TO INSTALL THE SEDIMENT TRAPS, SEDIMENT BASINS, DIVERSIONS, AND BYPASS CULVERTS. CONTRACTOR TO INSTALL THE DIVERSIONS AND MAINTAIN POSITIVE DRAINAGE TO SEDIMENT BASINS THROUGHOUT CONSTRUCTION. ADJUST OR INSTALL SILT FENCE AS NECESSARY FOR PHASE II CONSTRUCTION ACTIVITIES.
 - STABILIZATION OF ALL EXPOSED SOIL AREAS MUST BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION BUT IN NO CASE COMPLETED LATER THAN SEVEN (7) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
 - ONCE DEMOLITION IS COMPLETE AND ALL PHASE I EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE PER DRAINAGE AREA, CONTRACTOR IS TO CONTACT APPOMATTOX COUNTY TO CONFIRM ALL PHASE I EROSION AND SEDIMENT CONTROL MEASURES ARE ACCEPTABLE. UPON COMPLETION OF PHASE I CONSTRUCTION ACTIVITIES, CONTRACTOR MAY BEGIN PHASE II CONSTRUCTION ACTIVITIES.
- PHASE II PROBABLE CONSTRUCTION SEQUENCE**
- AS THE UPSTREAM DRAINAGE BASINS ARE PROTECTED AND CONFIRMED WITH THE COUNTY INSPECTORS, ONLY THEN CAN THE CLEARING AND GRUBBING COMMENCE WITHIN THE PROTECTED DRAINAGE BASIN. NO WORK SHALL BE DONE OUTSIDE OF THE DRAINAGE BASINS THAT ARE PROTECTED EXCEPT FOR INSTALLATION OF ADDITIONAL PERIMETER CONTROLS. AS ADDITIONAL DRAINAGE BASINS ARE PROTECTED, CLEARING AND GRUBBING CAN CONTINUE INTO THESE AREAS OF WORK.
 - ONCE THE CLEARING, GRUBBING, AND DE-STUMPING ARE COMPLETE IN EACH DRAINAGE AREA, COMMENCE GRADING PER THE GRADING PLAN.
 - STOCKPLES MUST BE SEEDED AND MULCHED IMMEDIATELY UPON CONSTRUCTION. CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE TO SEDIMENT BASINS THROUGHOUT CONSTRUCTION. ADJUST OR INSTALL SILT FENCE AS NECESSARY FOR PHASE II CONSTRUCTION ACTIVITIES.
 - BEGIN ROUGH GRADING OF ACCESS ROADS AND BUILDING PAD.
 - REMOVE AND/OR RELOCATE PHASE I ESC DITCHES AND DIVERSIONS AS THE SITE IS BROUGHT TO FINAL GRADE TO ENSURE RUNOFF IS CONVEYED TO SEDIMENT TRAPS AND BASINS.
 - PRIOR TO SEDIMENT TRAP OR BASIN REMOVAL, GRADING MUST BE COMPLETED SUCH THAT DRAINAGE AREAS PREVIOUSLY DRAINING TO TRAPS OR BASINS WILL DRAIN POSITIVELY TO ANOTHER BMP.
 - REMOVE SEDIMENT TRAPS AS SITE IS BROUGHT TO FINAL GRADE. ADD ADDITIONAL DIVERSIONS TO CONVEY RUNOFF TO SEDIMENT BASINS PRIOR TO STORMWATER UTILITY INSTALLATION. DITCHES MUST BE LINED WITH THE APPROPRIATE CHANNEL LINER SPECIFIED ON SHEET CE-503 IMMEDIATELY UPON CONSTRUCTION.
 - BEGIN INSTALLATION OF THE PERIMETER SECURITY FENCE, UTILIZING THE EROSION AND SEDIMENT CONTROL MEASURES DESCRIBED IN THE "EROSION AND SEDIMENT CONTROL NOTES" ON SHEETS CE-100 THROUGH CE-114.
 - BEGIN INSTALLATION OF PERMANENT UNDERGROUND UTILITIES. ADEQUATE COVER SHALL BE PROVIDED IN THE TEMPORARY CONDITION FOR INSTALLATION OF PIPES.
 - INSTALL INLET PROTECTION ON ALL NEW STORMWATER INLETS.
 - FINALIZE UTILITY AND STORM DRAIN INSTALLATION. INSTALL ADDITIONAL SEDIMENT CONTROLS AS NEEDED TO PROTECT STORM DURING INSTALLATION.
 - PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN 7 DAYS AFTER FINAL GRADING IS REACHED. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS.
 - BEGIN BUILDING CONSTRUCTION.
 - COMMENCE FINAL STABILIZATION OF ROADS/PARKING AREAS AND INSTALLATION OF PAVEMENT.
 - AS UPSTREAM ROUGH GRADING IS COMPLETE AND TEMPORARILY STABILIZED, REMOVE DIVERSION BERMS.
 - ONCE THE SITE IS PERMANENTLY STABILIZED AND FOLLOWING APPROVAL FROM THE COUNTY INSPECTOR, CONVERT ALL TEMPORARY SEDIMENT BASINS INTO PERMANENT PONDS ACCORDING TO THE CONVERSION SEQUENCE ON THESE PLANS. INSTALL STORMWATER MANAGEMENT SYSTEMS AND DEVICES AND/OR PLANTINGS.
 - REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY AFTER THE SITE IS FULLY STABILIZED), ONCE APPROVED BY THE COUNTY INSPECTOR. RESTORE LAYDOWN AREAS AND TEMPORARY WORKSPACES AREAS PER THE RESTORATION SEQUENCE ON THIS SHEET.

SEQUENCE OF CONSTRUCTION NOTE

THE SEQUENCE OF CONSTRUCTION SHOWN ABOVE IS A GENERAL OVERVIEW AND IS INTENDED TO CONVEY THE GENERAL CONCEPTS OF THE EROSION CONTROL DESIGN AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETAILED PHASING AND CONSTRUCTION SEQUENCING NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS INCLUDED IN THESE PLANS. THE CONTRACTOR SHALL NOTIFY THE ORDERER IN WRITING IMMEDIATELY PRIOR TO AND/OR DURING CONSTRUCTION IF ANY ADDITIONAL INFORMATION ON THE CONSTRUCTION SEQUENCE IS NECESSARY. CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND ALL OTHER APPLICABLE LAWS.

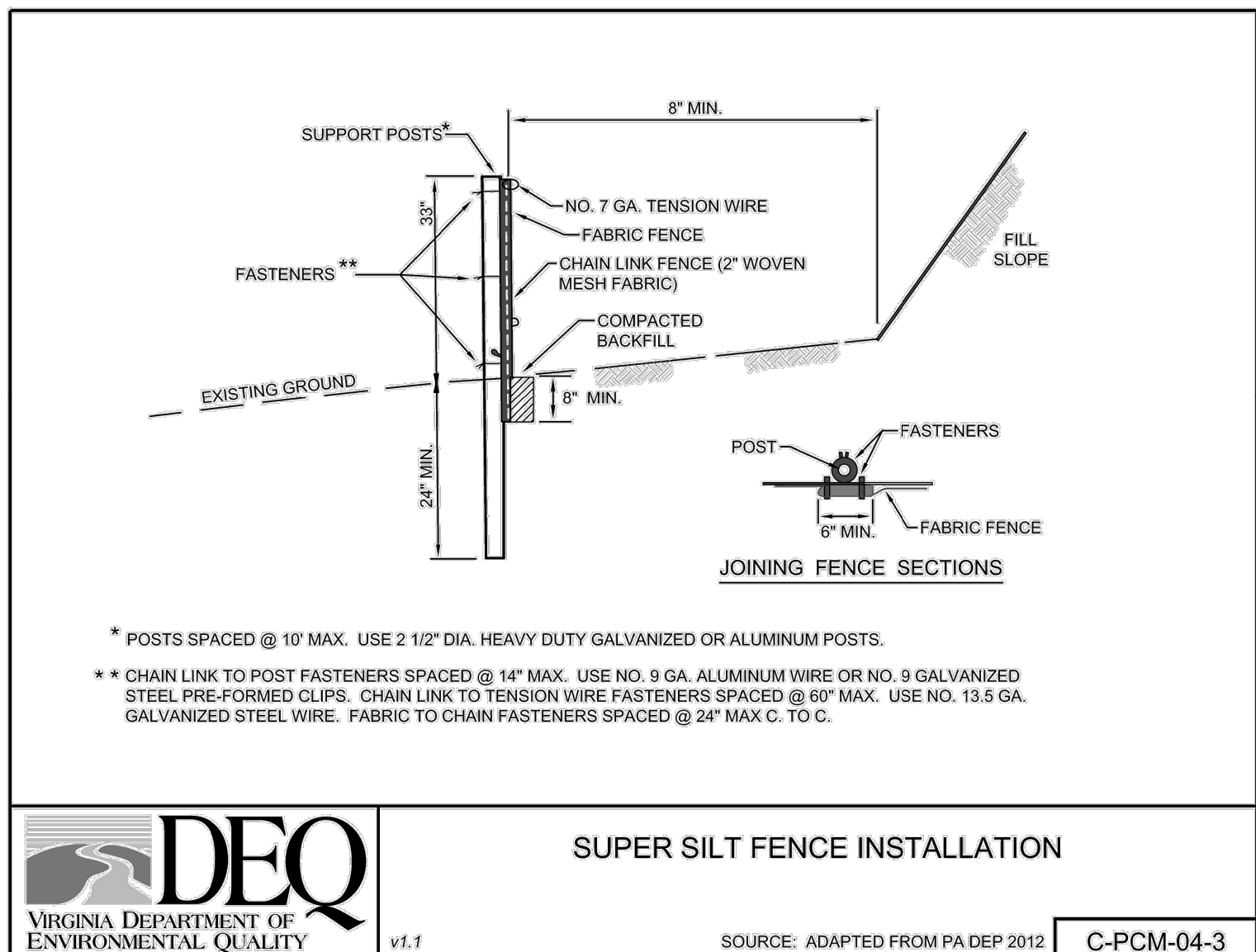
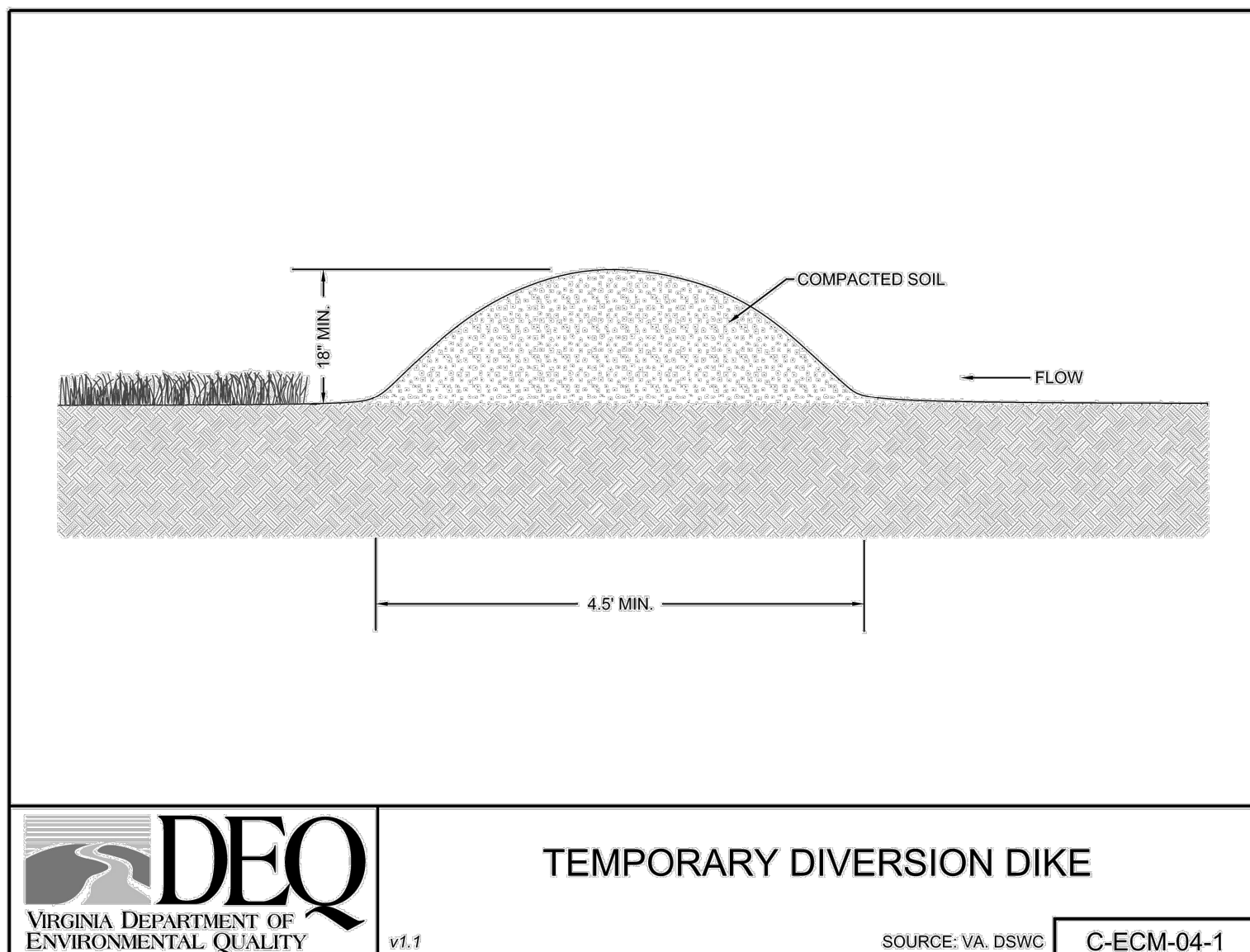
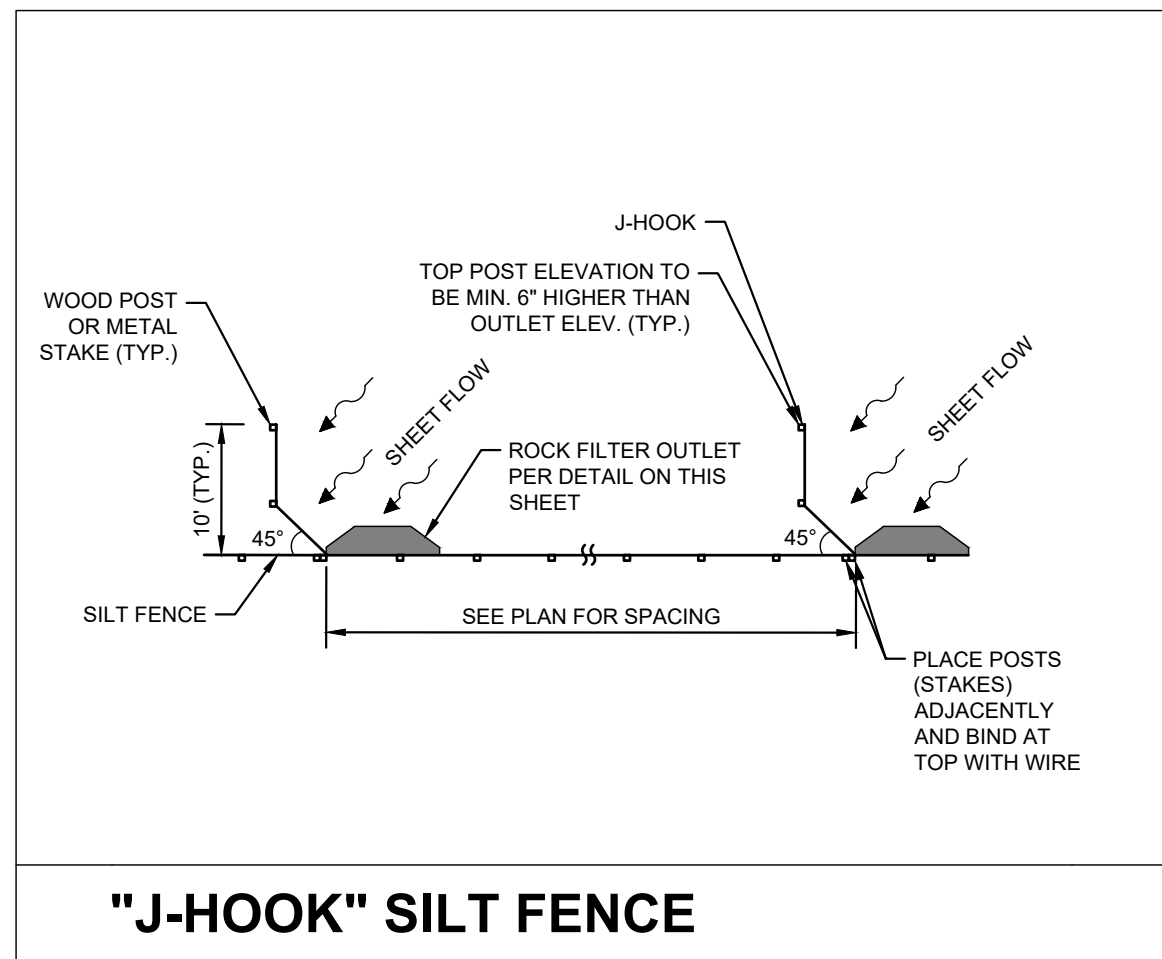
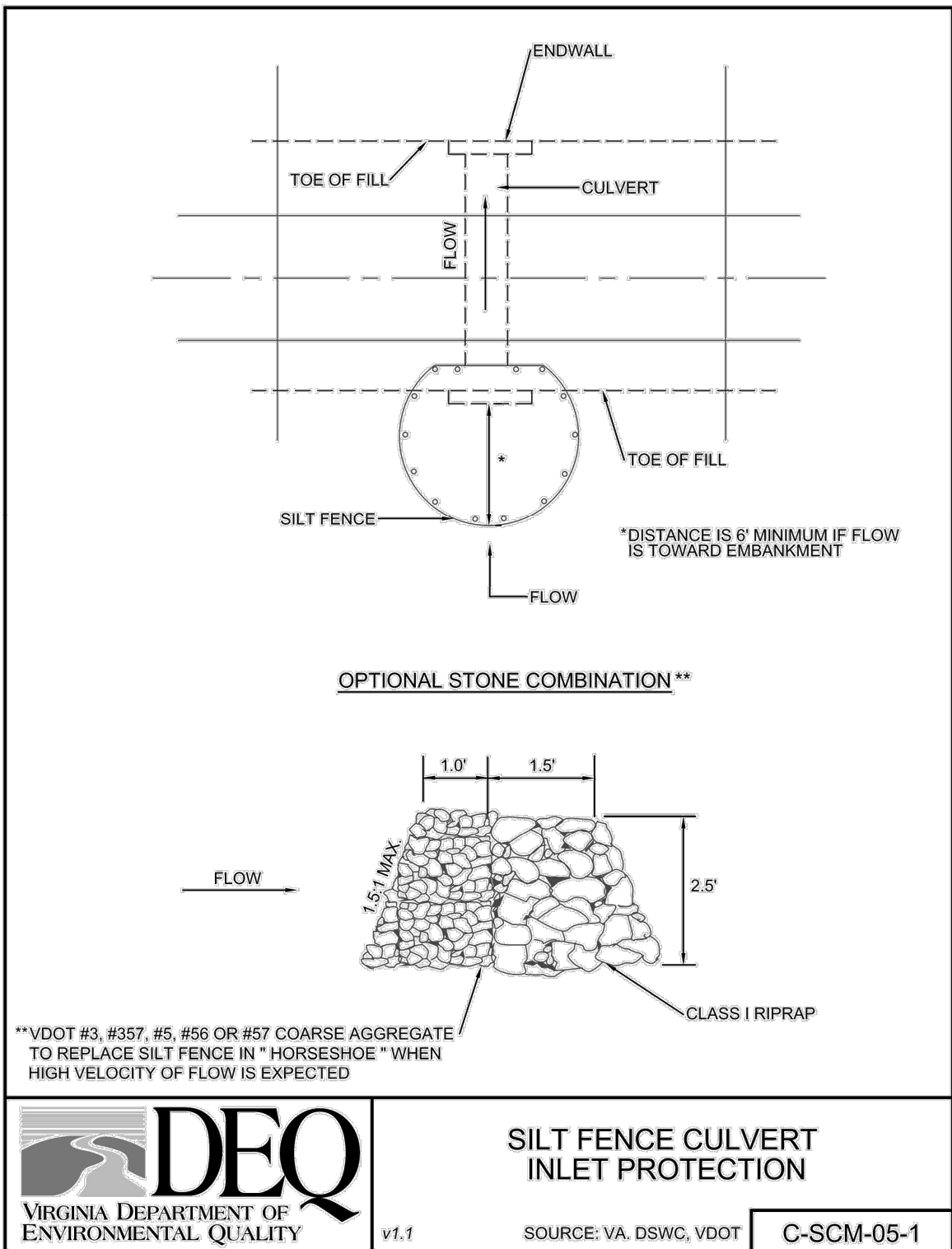
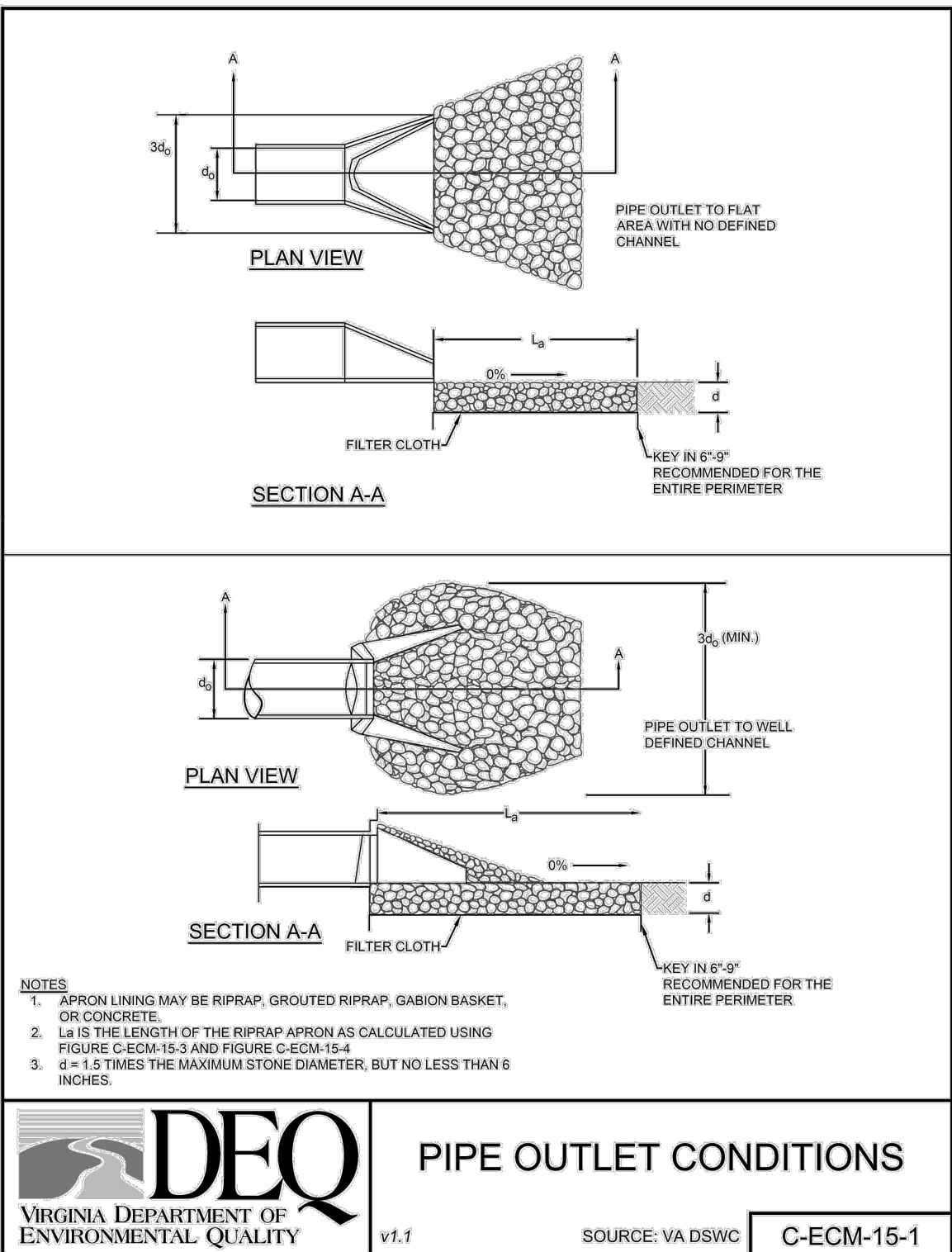
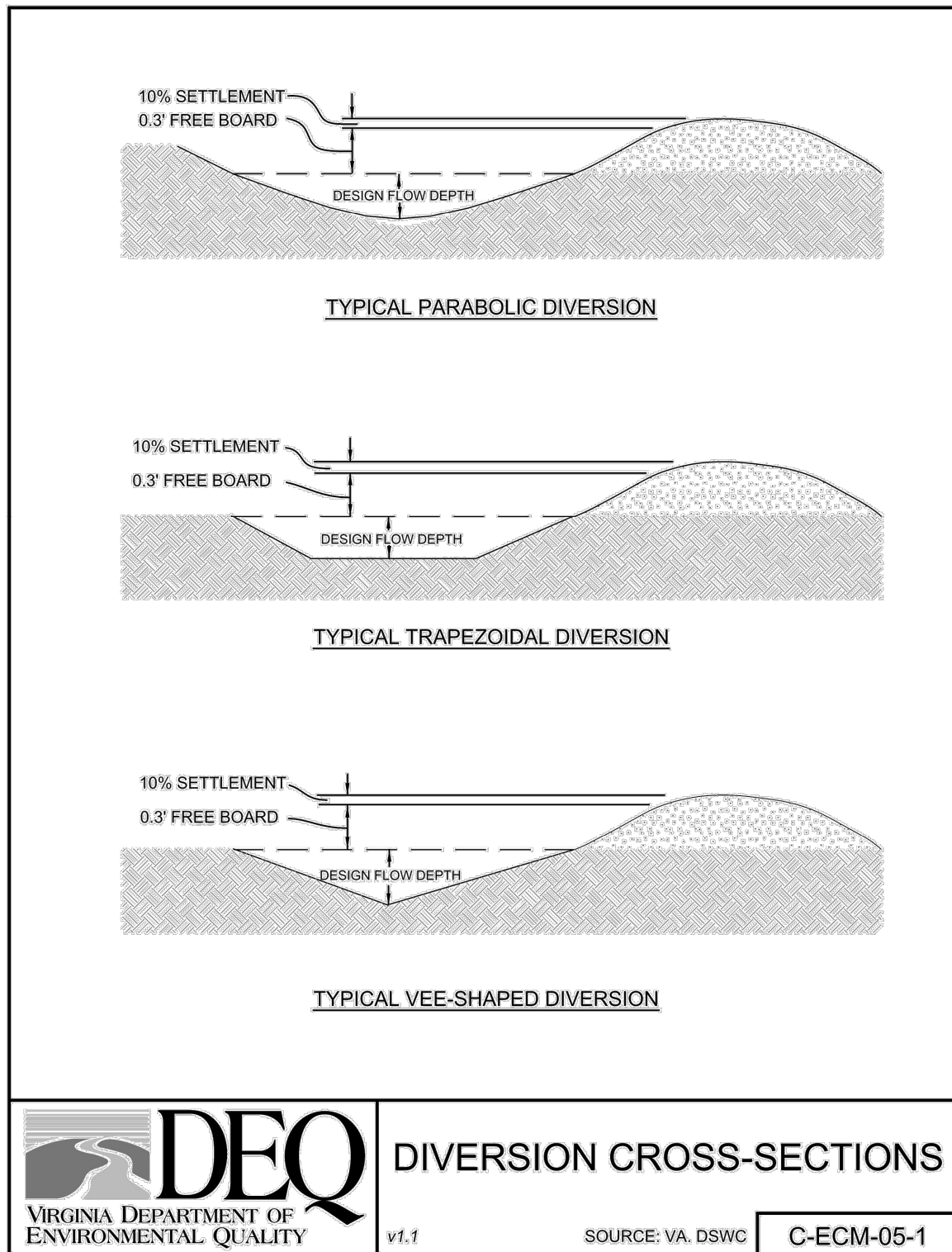
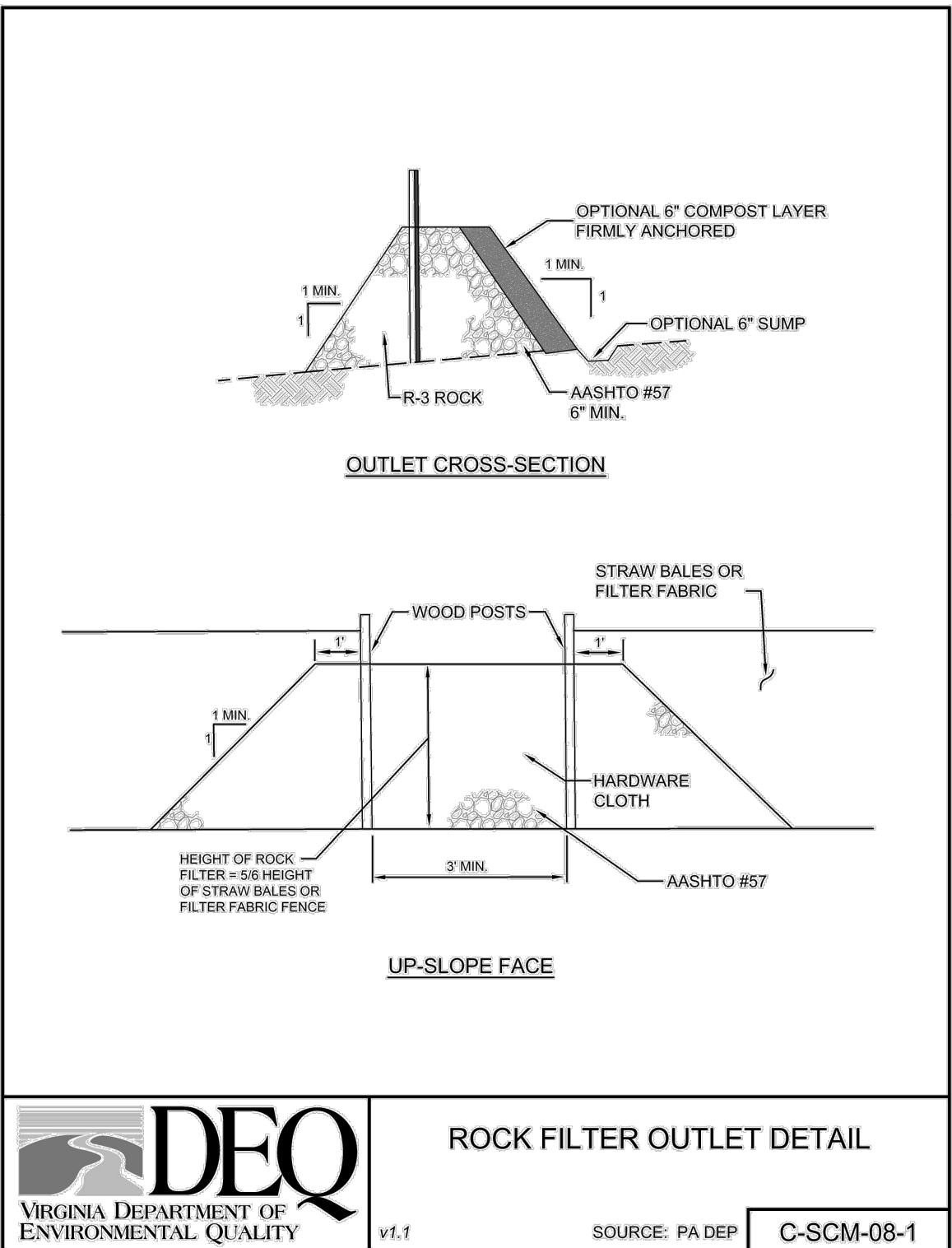
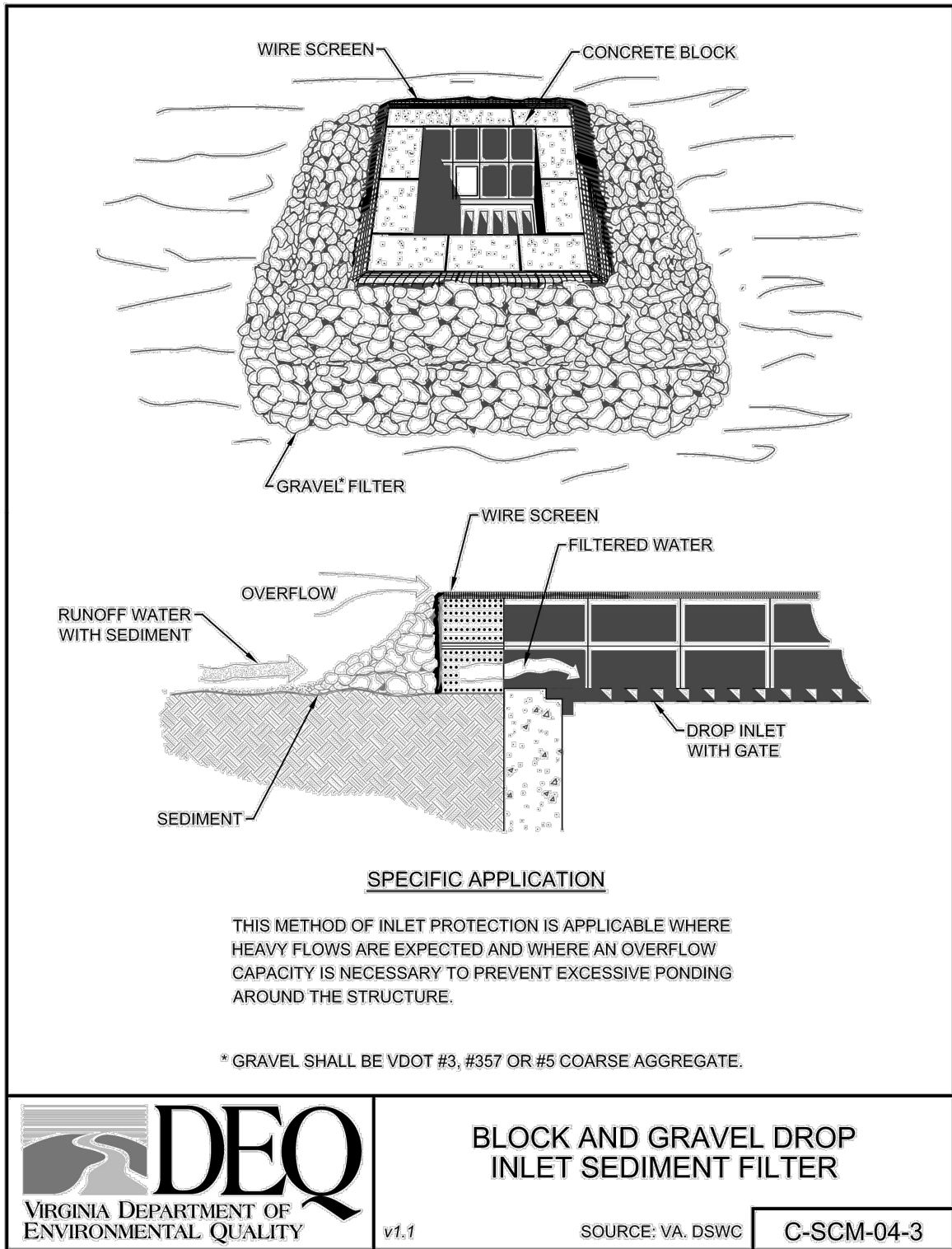
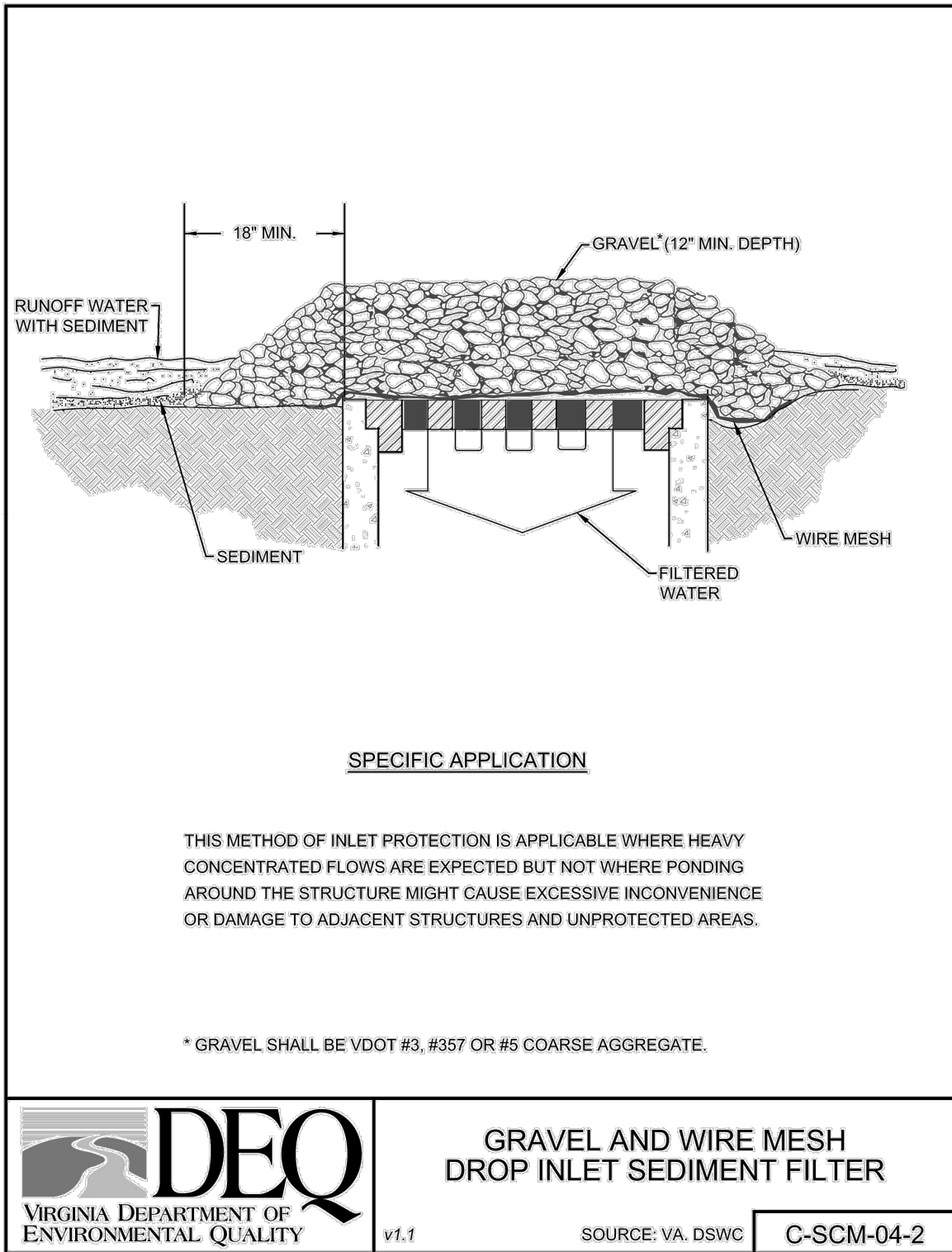
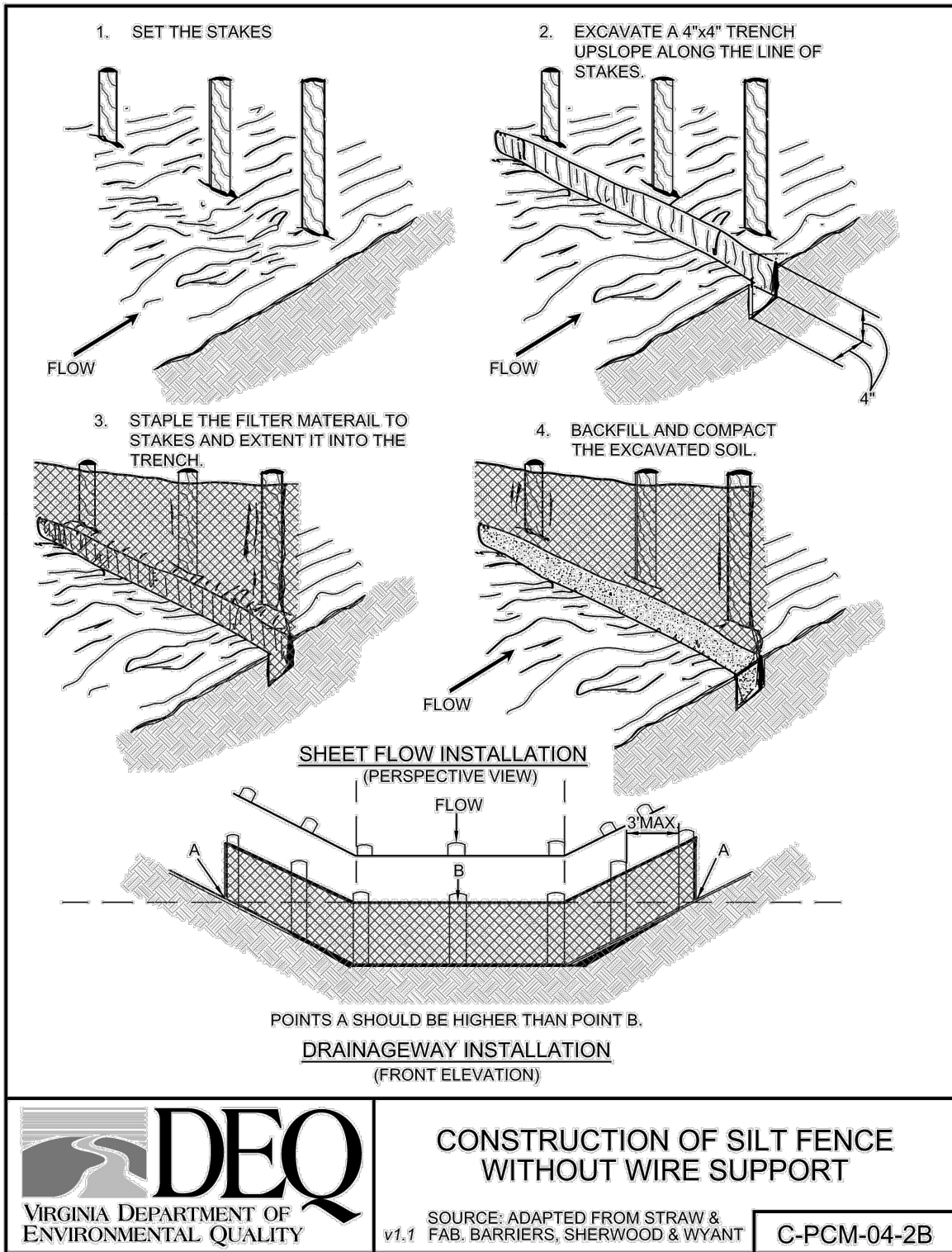
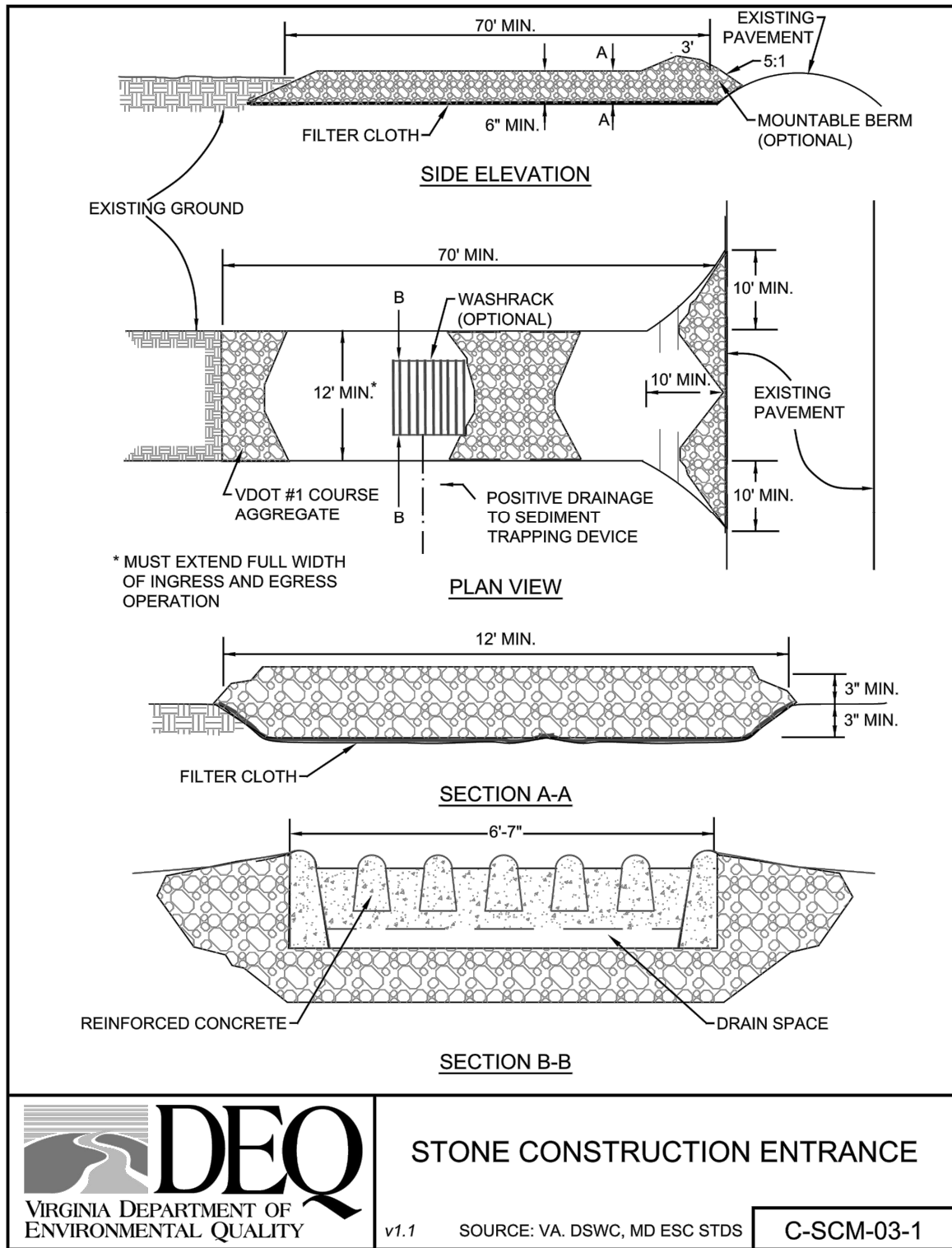
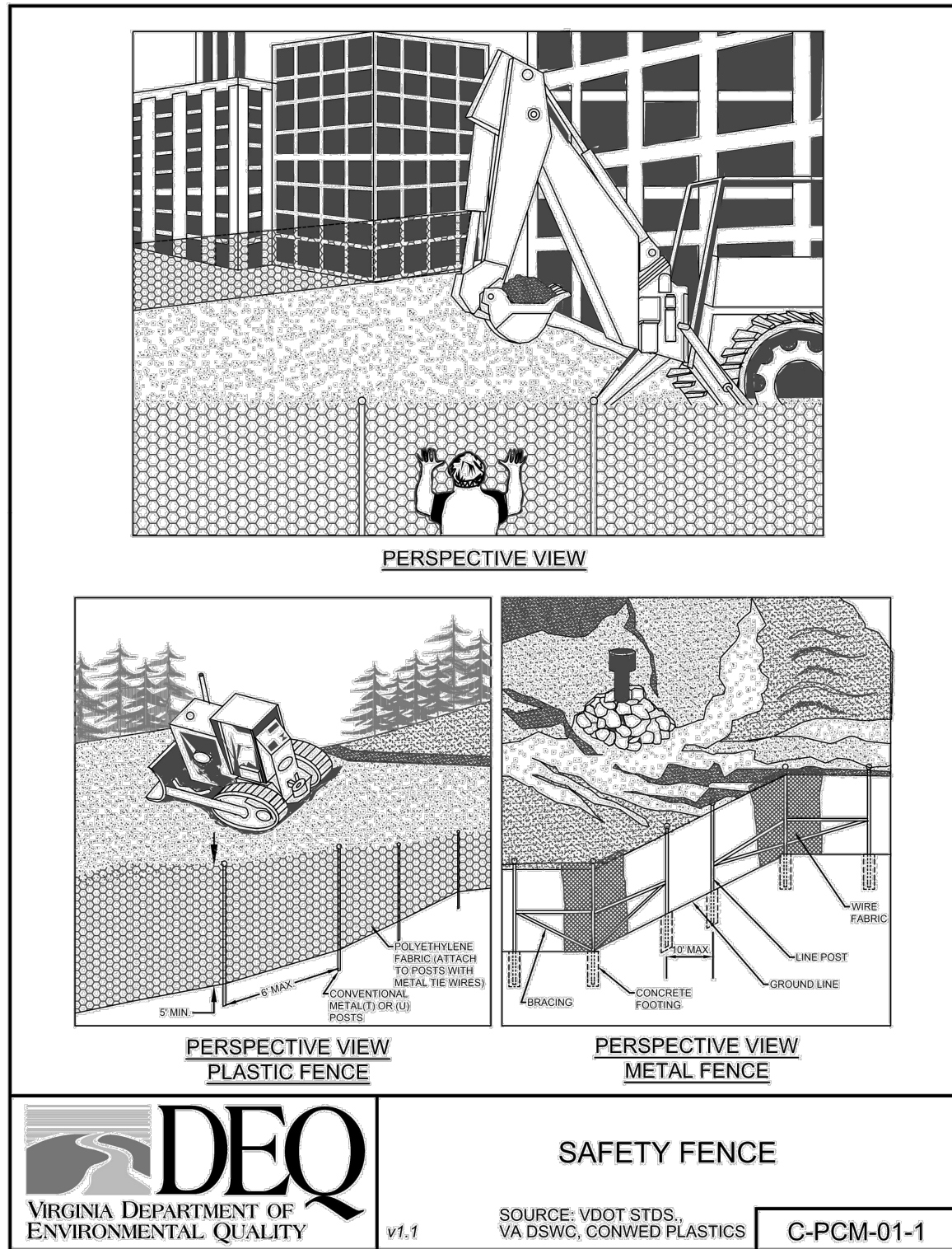
RESTORATION SEQUENCE FOR TEMPORARY WORKSPACE (SECTIONS OF THE PERIMETER FENCE)

SEE SHEETS CP-200 THROUGH CP-205 FOR LOCATIONS OF TEMPORARY WORKSPACE ALONG PERIMETER FENCE.

WHEN CONSTRUCTION IS COMPLETE, CONTRACTOR SHALL RESTORE TEMPORARY WORKSPACE AREAS PER THE RESTORATION SEQUENCE BELOW:

- ENSURE APPROPRIATE PERIMETER CONTROLS ARE INSTALLED AND THAT POSITIVE DRAINAGE TO EROSION CONTROL MEASURES IS MAINTAINED AT ALL TIMES.
- RIP AND/OR SCARIFY SOIL TO A MINIMUM DEPTH OF 4"-6" BELOW GRADE.
- SPREAD TOPSOIL OVER DISTURBED AREAS AND TIE TO ADJACENT AREAS, MAINTAINING POSITIVE DRAINAGE ACROSS NEWLY GRADED AREA TO EROSION CONTROL FEATURES.
- SEED AND STABILIZE ARE

Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CE-502 EROSION AND SEDIMENT CONTROL DETAILS November 08, 2025 04:23:41pm
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COMMONWEALTH OF VIRGINIA
JOSH M MACDONALD
Lic. No. 0402057995
11/14/2015
PROFESSIONAL ENGINEER

KHA PROJECT	113706001	DATE	11/14/2025	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
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EROSION AND SEDIMENT CONTROL DETAILS

PROJECT HERCULES

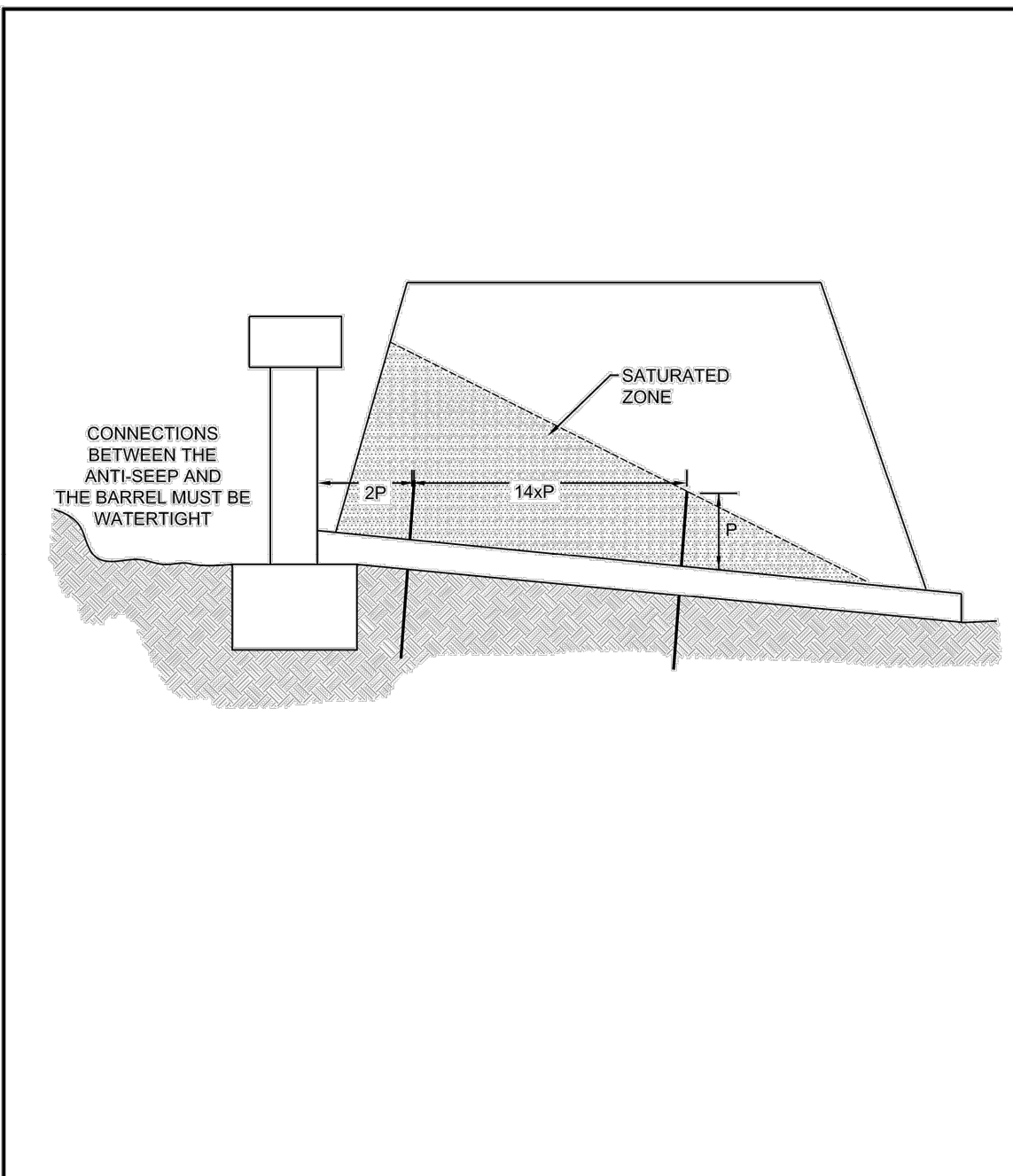
VA

APPOMATTOX COUNTY

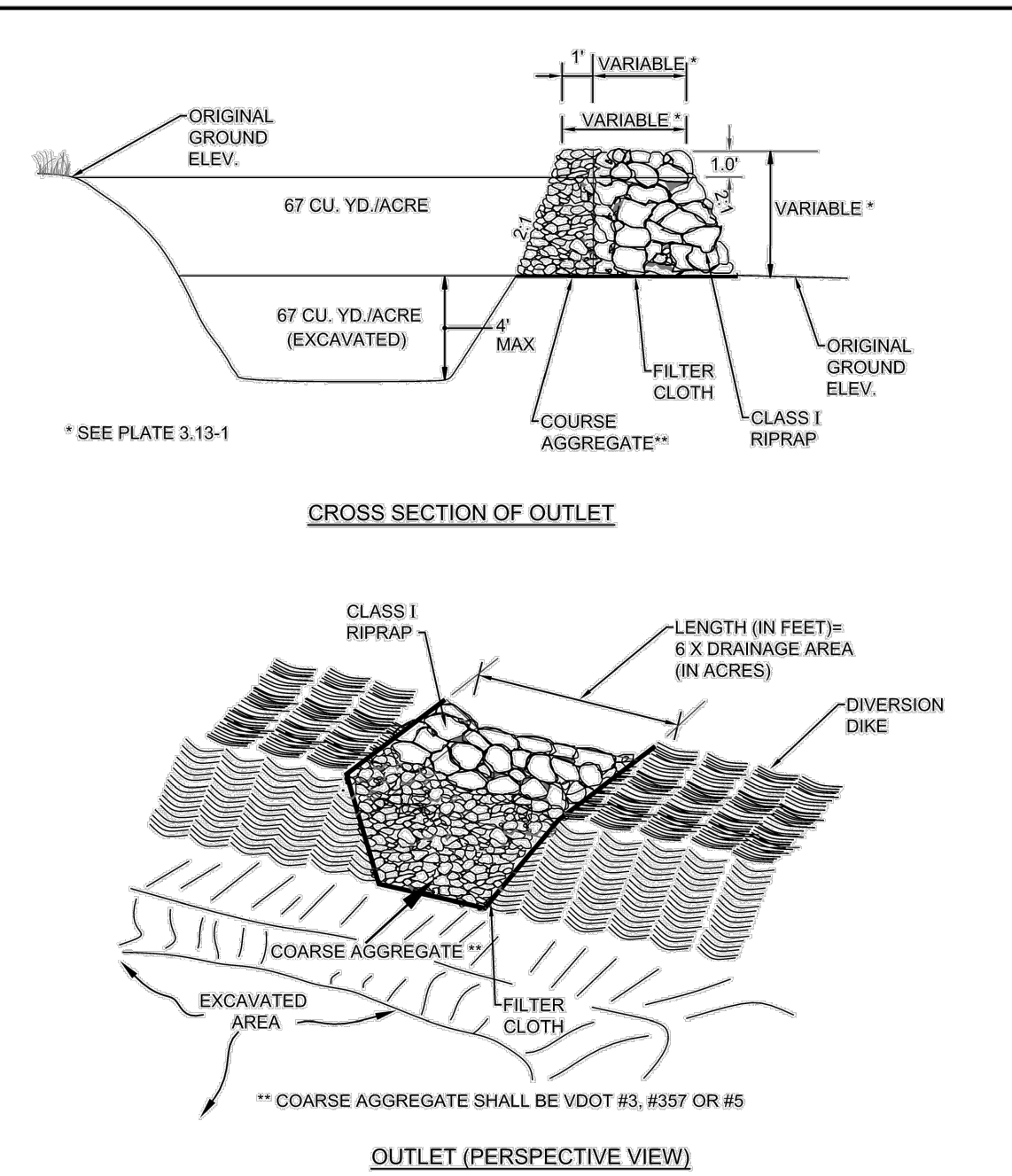
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CE-502

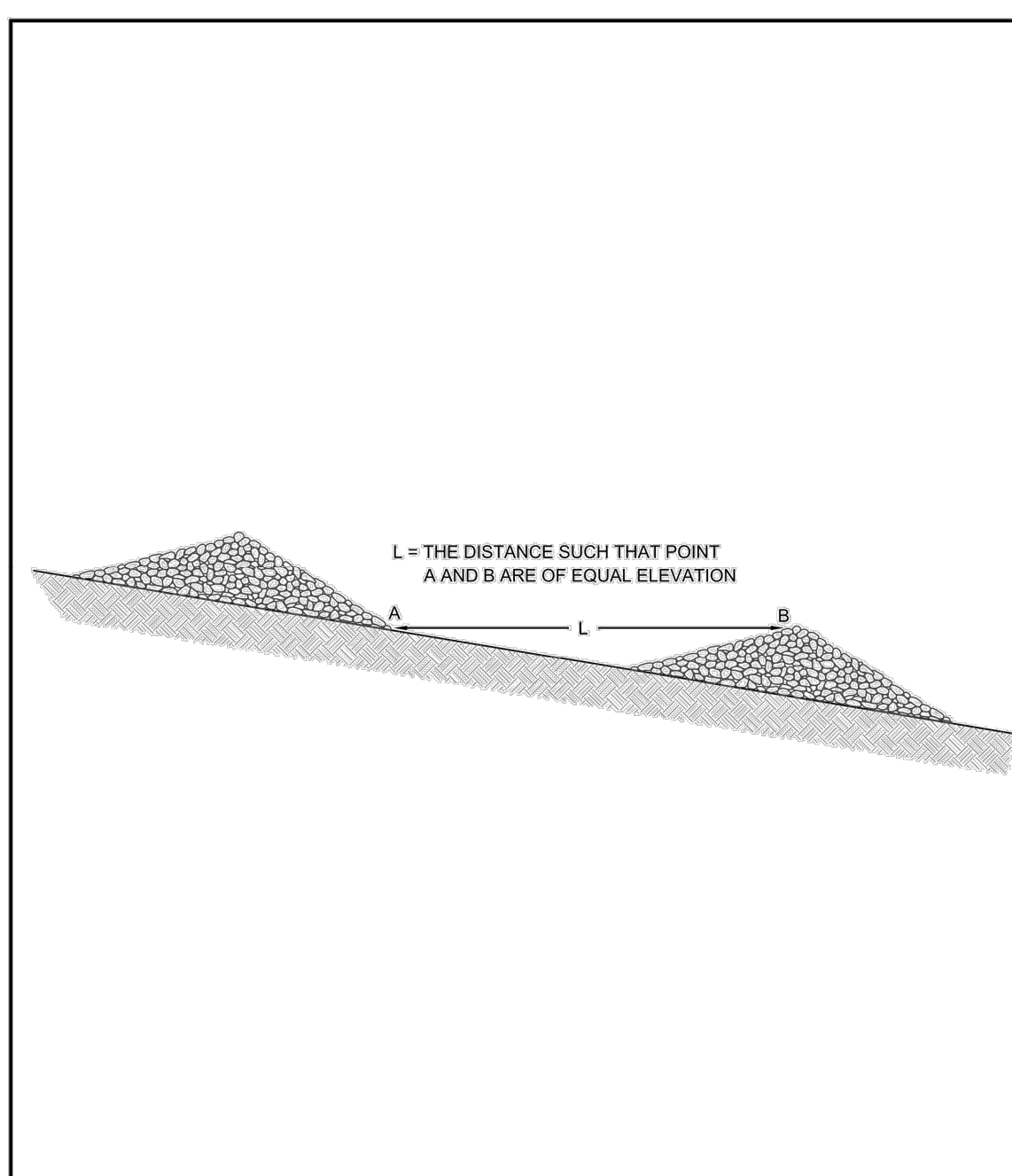
Plotted by: McCray, Stephen Sheet Set: KCS Layout: CE-503 EROSION AND SEDIMENT CONTROL DETAILS November 05, 2025 04:24:10pm
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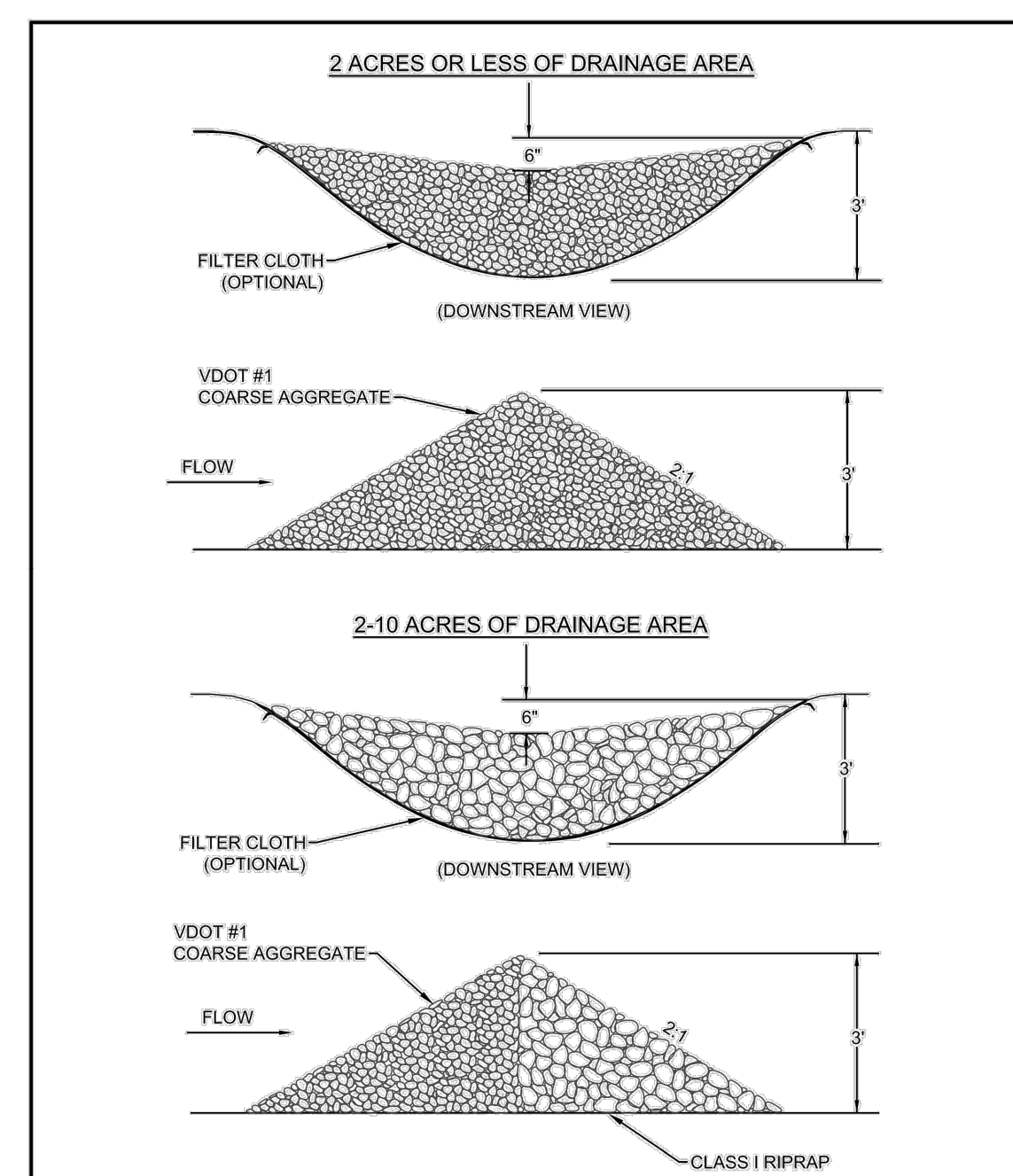
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v1.1 SOURCE: VA, DSWC C-SCM-12-4
ANTI-SEEP COLLAR



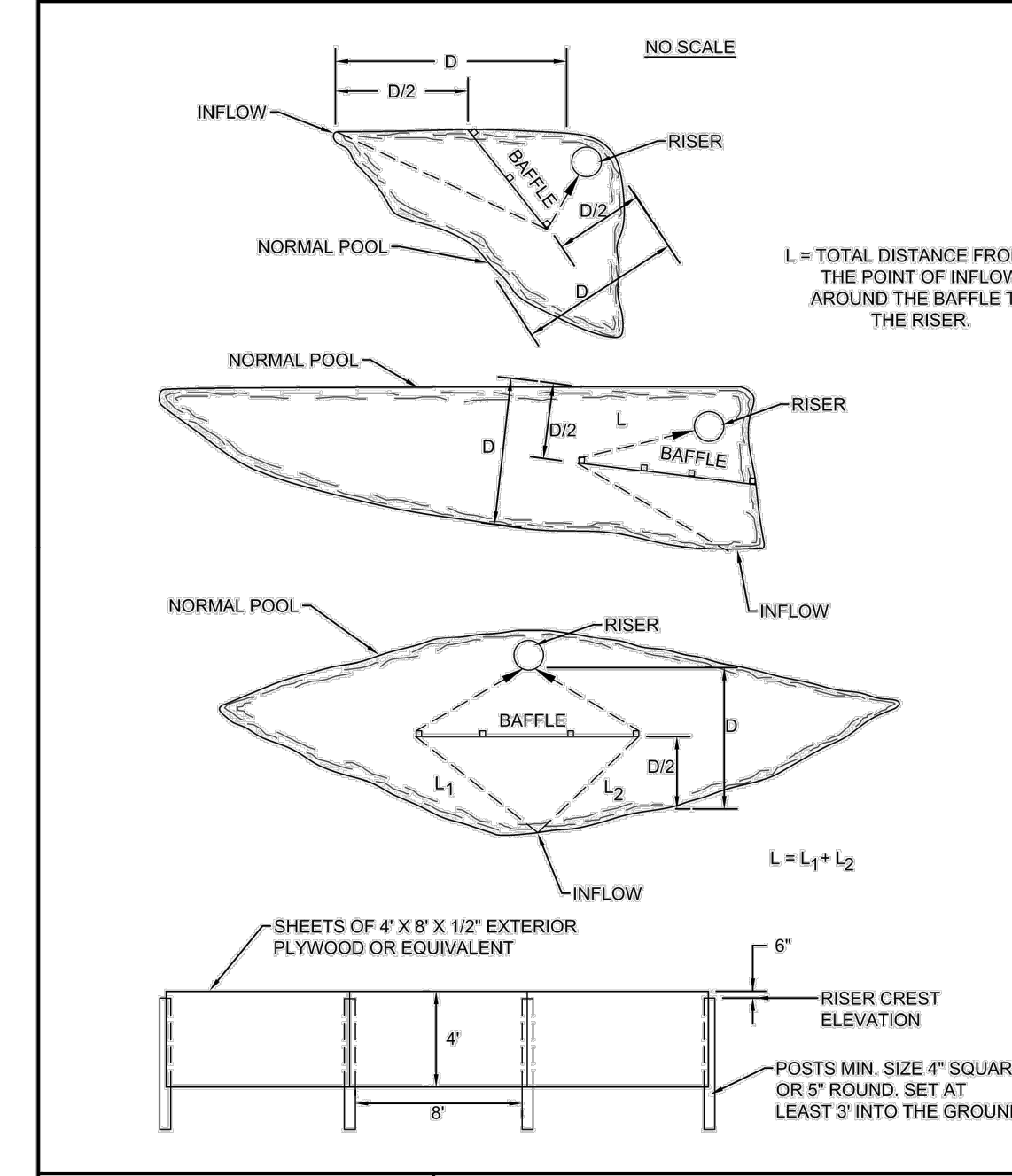
DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
v1.1 SOURCE: VA, DSWC C-SCM-11-2
TEMPORARY SEDIMENT TRAP



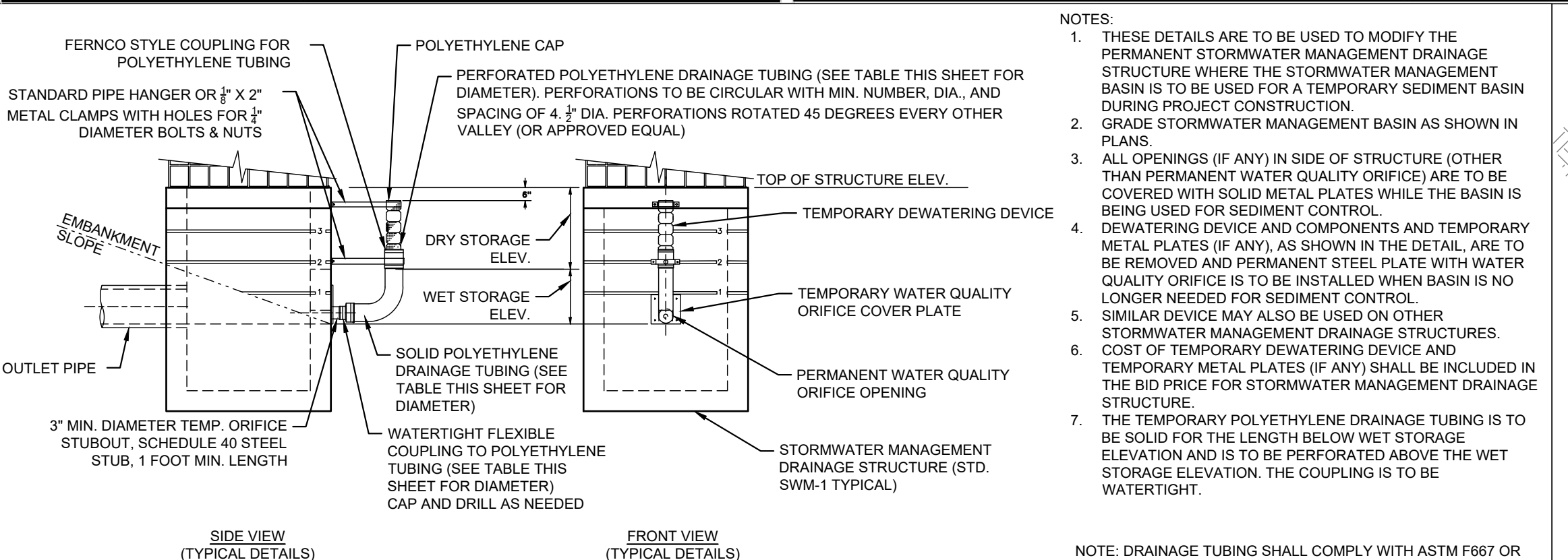
DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
v1.1 SOURCE: DSWC C-SCM-07-2
SPACING BETWEEN ROCK CHECK DAMS



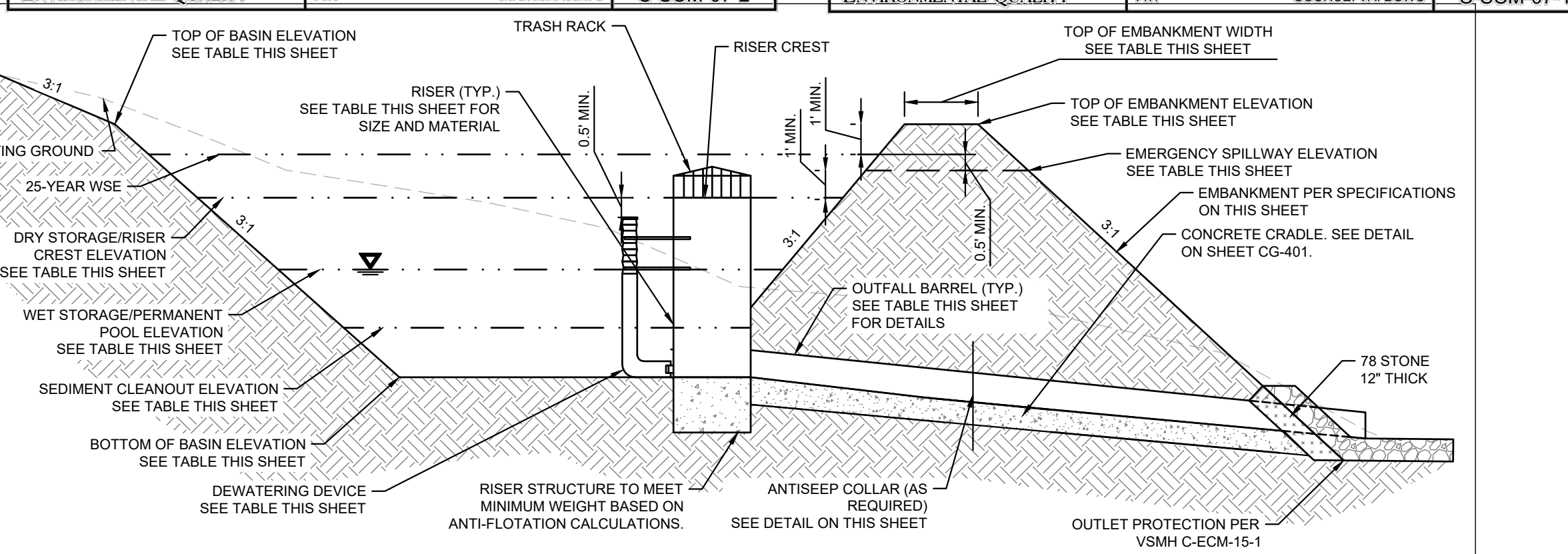
DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
v1.1 SOURCE: VA, DSWC C-SCM-07-1
ROCK CHECK DAM



DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
v1.1 SOURCE: USDA-SCS C-SCM-12-6
EXAMPLE PLAN VIEWS OF BAFFLE LOCATIONS IN SEDIMENT BASINS



VDOT STORMWATER MANAGEMENT (SWM) DETAIL 302



TEMP. SEDIMENT BASIN CROSS SECTION WITH EMERGENCY SPILLWAY (NTS)

SEDIMENT BASIN DESIGN SUMMARY TABLE																																	
BASIN INFORMATION				WET STORAGE				DRY STORAGE		RISER						DEWATERING				SPILLWAY			EMBANKMENT		BAFFLE			BARREL					
SEDIMENT BASIN NO.	SEDIMENT BASIN CONDITION	DRAINAGE AREA	BOTTOM OF BASIN ELEVATION	VOLUME REQUIRED	VOLUME PROVIDED	PERMANENT POOL ELEVATION	SEDIMENT CLEANOUT ELEVATION	VOLUME REQUIRED	VOLUME PROVIDED	DESIGN RISER DIAMETER	RISER SHAPE	CONSTRUCTION RISER SIZE	RISER CREST ELEVATION	RISER MATERIAL	MINIMUM WEIGHT OF RISER	ANTI-VORTEX DEVICE DIAMETER	DEWATERING DEVICE DIAMETER	DEWATERING TIME	DEWATERING DEVICE ELEVATION	EMERGENCY SPILLWAY ELEVATION	EMERGENCY SPILLWAY WIDTH	25-YR STORM WATER SURFACE ELEVATION	TOP OF EMBANKMENT ELEVATION	TOP OF EMBANKMENT WIDTH	BAFFLE LENGTH	TOP OF BAFFLE ELEVATION	FLOWLENGTH TO WIDTH RATIO	PIPE LENGTH	PIPE DIAMETER	PIPE MATERIAL	INVERT IN	INVERT OUT	
		AC	FT	CF	CF	FT	FT	CF	CF	IN	IN	IN	FT		LBS	IN	IN	HR	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	IN	IN		FT	FT
SB-A	PERM	27.86	707.00	50.369	145.324	711.00	710.00	50.369	307.894	(1) 60	Circular	(1) 60	713.50	RCP	9,797	96	2.9	56.7	711.00	715.00	15	714.49	718.00	8	166	714.00	1.98	180	(1) 30	RCP	707.00	706.09	
SB-B	PERM	7.66	802.00	13.857	13.804	805.00	804.00	13.857	51.400	(1) 60	Circular	(1) 60	807.50	RCP	22,299	96	1.1	107.6	805.00	808.60	14	808.07	810.00	15	115	808.00	3.79	109	(1) 24	RCP	792.94	782.10	
SB-C	PERM	25.05	760.00	45.315	73.062	764.00	763.00	45.315	211.064	(1) 60	Circular	(1) 60	767.60	RCP	11,181	96	3.0	39.7	764.00	768.35	24	768.82	771.00	8	107	768.00	3.76	103	(1) 24	RCP	760.00	759.18	

*25-yr storm water surface elevation corresponds to the Ultimate Post Development condition which is more restrictive than the Phase I E&S (bare earth) condition

PHASE I E&S DITCH DESIGN SUMMARY TABLE																							
DITCH SECTION ID	DRAINAGE AREA	APPROX. LENGTH	C VALUE	TIME OF CONC.		I ₂	I ₁₀	I ₁₀₀	Q ₂	Q ₁₀	Q ₁₀₀	SLOPE	MANNING'S N	BOTTOM WIDTH	SIDE SLOPES		DESIGN DEPTH	2-YR DEPTH	2-YR VELOCITY	10-YR DEPTH	100-YR DEPTH	CHANNEL LINING	APPROX. CHK DAMS
	ACRES	FT		MIN	IN/HR	IN/HR	IN/HR	CFS	CFS	CFS	FT/FT	L			R	FT		FT/S	FT	FT			
DIV-1	7.27	722	0.50	20.87	2.80	3.79	5.11	10.16	13.78	18.58	0.01	0.02	5.0	3	3	3	1.0	0.40	4.09	0.48	0.56	EC-3	20
DIV-2	9.06	432	0.50	13.93	3.42	4.59	6.10	15.51	20.79	27.65	0.02	0.02	1.0	3	3	3	2.0	0.77	6.05	0.88	0.99	EC-3	6
DIV-3	15.60	818	0.50	14.00	3.42	4.58	6.09	26.64	35.72	47.52	0.02	0.02	1.0	3	3	3	2.0	1.04	6.23	1.18	1.32	EC-3	9

*Manning's N-value of 0.02 corresponds to "bare earth" land cover

*Rational Coefficient corresponds to bare earth land cover condition

PHASE II E&S AND POST DEVELOPMENT DITCH DESIGN SUMMARY TABLE																						
DITCH SECTION ID	DRAINAGE AREA	APPROX. LENGTH	C VALUE	TIME OF CONC.	I ₂	I ₁₀	I ₁₀₀	Q ₂	Q ₁₀	Q ₁₀₀	SLOPE	MANNING'S N	BOTTOM WIDTH	SIDE SLOPES		DESIGN DEPTH	2-YR DEPTH	2-YR VELOCITY	10-YR DEPTH	100-YR DEPTH	CHANNEL LINING	APPROX. CHK DAMS
	ACRES	FT		MIN	IN/HR	IN/HR	IN/HR	CFS	CFS	CFS	FT/FT	FT	L	R	FT	FT	FT/S	FT	FT			
														FT/FT								
SCC-01	7.79	800	0.44	20.80	2.80	3.80	5.12	9.60	13.02	17.54	0.01	0.02	5.0	3	3	1.0	0.39	4.01	0.46	0.54	EC-3	22
SCC-02	7.11	531	0.34	23.80	2.60	3.54	4.80	6.28	8.56	11.60	0.05	0.02	5.0	3	3	5.0	0.21	5.40	0.25	0.30	EC-3	6
SCC-03	8.34	1182	0.32	17.70	3.05	4.11	5.51	8.14	10.98	14.71	0.01	0.02	0.0	3	3	2.5	0.82	3.99	0.92	1.03	EC-2	6
SCC-04	6.69	680	0.73	5.00	4.93	6.49	8.51	24.09	31.68	41.55	0.01	0.02	0.0	3	3	2.5	1.24	5.23	1.37	1.52	EC-3	4
SCC-05	1.60	262	0.78	5.00	4.93	6.49	8.51	6.16	8.10	10.62	0.03	0.02	0.0	3	3	2.5	0.59	5.82	0.66	0.73	EC-3	5

*Manning's N-value of 0.02 corresponds to "bare earth" land cover

*Rational Coefficient corresponds to most restrictive land cover type between Phase I E&S (bare earth) and the Ultimate Post Development condition

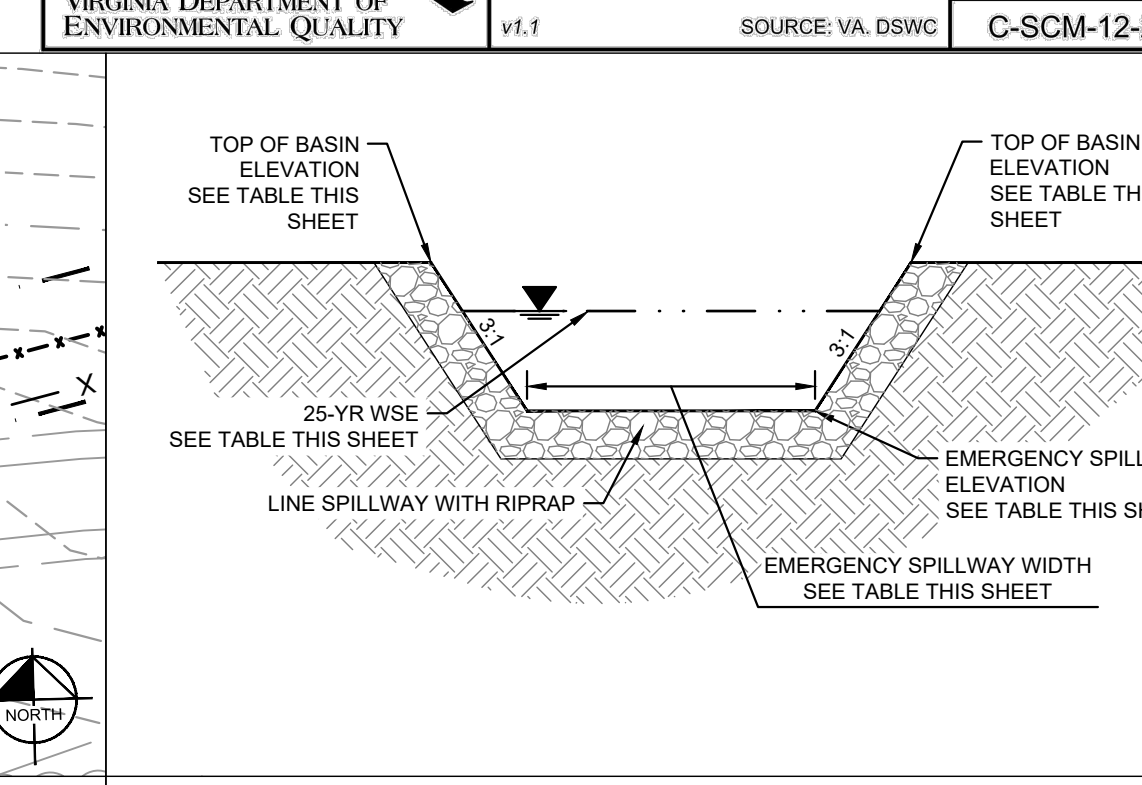
*SCC-06 was conservatively calculated by combining the flows from SCC-03 with the peak flows exiting Pond C

SEDIMENT TRAP DESIGN SUMMARY TABLE																	
		WET STORAGE					DRY STORAGE				EMBANKMENT		DIMENSIONS				
SEDIMENT TRAP NO.	SEDIMENT TRAP CONDITION	DRAINAGE AREA	BOTTOM OF TRAP ELEVATION	VOLUME REQUIRED	VOLUME PROVIDED	BASE OF OUTLET ELEVATION	VOLUME REQUIRED	VOLUME PROVIDED	TOP OF OUTLET ELEVATION	TOP OF EMBANKMENT ELEVATION	TOP OF EMBANKMENT WIDTH	WIDTH	LENGTH	SIDE SLOPES	OUTLET LENGTH	GRADED OPENING	
N/A	N/A	AC	FT	CF	CF	FT	CF	CF	FT	FT	FT	FT	FT	N/A	FT	FT	
ST-1	TEMP	2.87	730.50	5.192	6.591	732.00	5.192	8.491	733.50	734.50	8	40	100	3:1	17	22	
ST-2	TEMP	1.62	751.00	2.931	3.619	752.50	2.931	5.134	754.00	755.00	8	25	80	3:1	10	15	
ST-3	TEMP	2.96	766.50	5.355	9.391	768.00	5.355	11.508	769.50	770.50	8	61	95	3:1	18	23	
ST-4	TEMP	2.27	756.00	4.106	6.362	757.50	4.106	8.037	759.00	760.00	8	60	65	3:1	14	19	

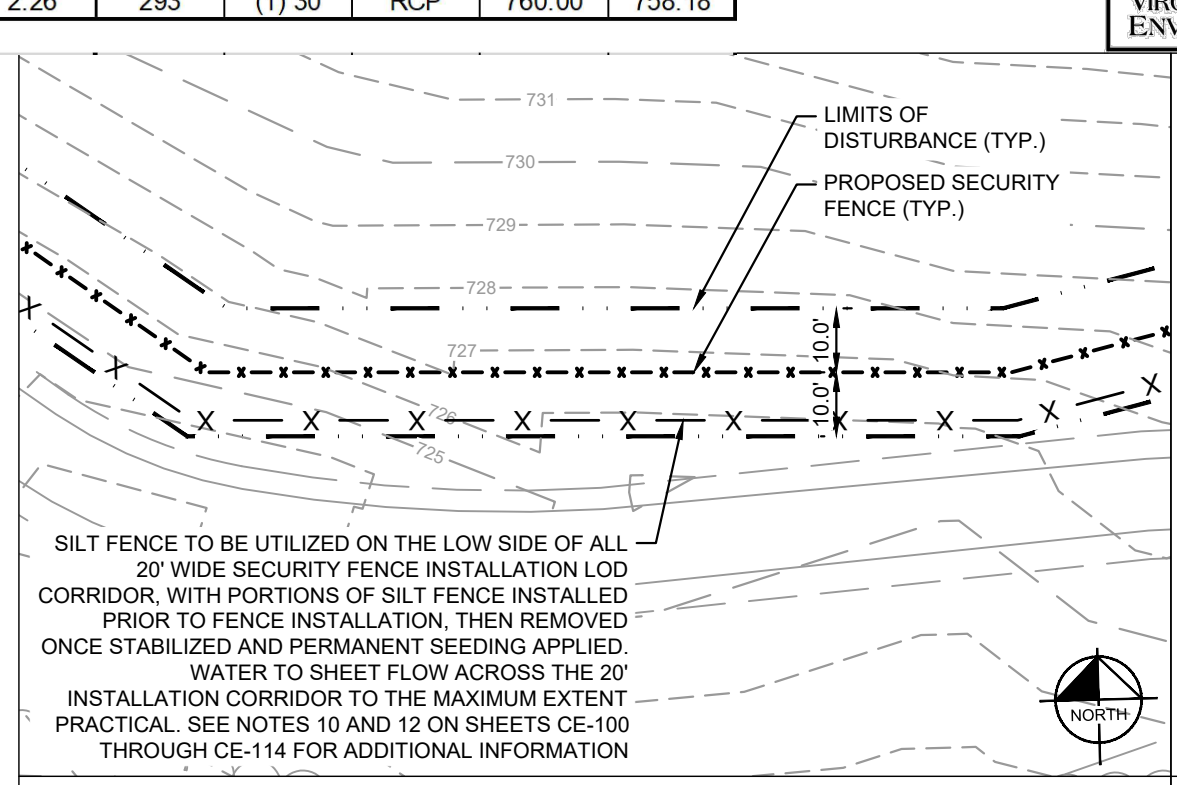
SEDIMENT BASIN/WET POND A
SEDIMENT BASIN/WET POND B
SEDIMENT BASIN/WET POND C

BASIN RIPRAP OUTLET PROTECTION SUMMARY													
OUTFALL NO.				APRON (PER BARREL)				BARREL		TOTAL APRON			
OUTFALL NO.	OUTLET PIPE DIAMETER (D _o)	25-YR PEAK DISCHARGE (24 HRS)	TAILWATER CONDITION	APRON LENGTH (L _a)	UPSTREAM WIDTH (3D _o)	DOWN-STREAM WIDTH (W)	NUMBER OF BARRELS	BARREL SPACING	APRON LENGTH (L _a)	UPSTREAM WIDTH (3D _o)	DOWN-STREAM WIDTH (W)	AREA OF APRON	STONE DIAMETER (d ₅₀)
PO-01	30	54.3	MIN	24.0	7.5	26.5	1		24.0	7.5	26.5	408	1.0
PO-02	24	22.4	MIN	14.0	6.0	16.0	1		14.0	6.0	16.0	154	0.5
S111	30	54.9	MIN	24.0	7.5	26.5	1		24.0	7.5	26.5	408	1.0

THE 25-YEAR PEAK DISCHARGE UTILIZED IS THE MORE CONSERVATIVE VALUE BETWEEN THE 25-YEAR PEAK FLOW LEAVING SEDIMENT BASINS A, B, AND C AND THEIR CORRESPONDING WET PONDS FOLLOWING CONVERSION.

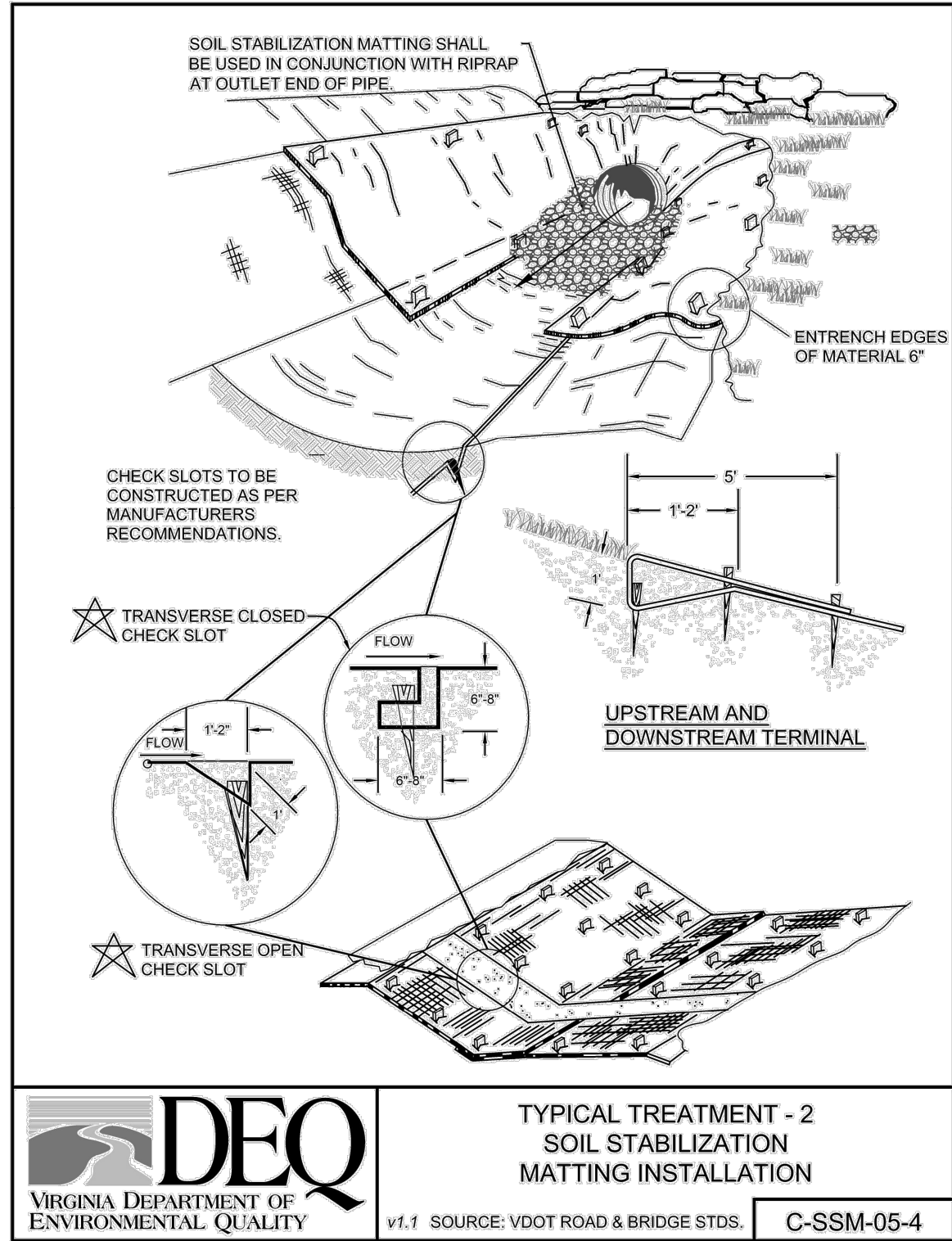


EMERGENCY SPILLWAY CROSS SECTION

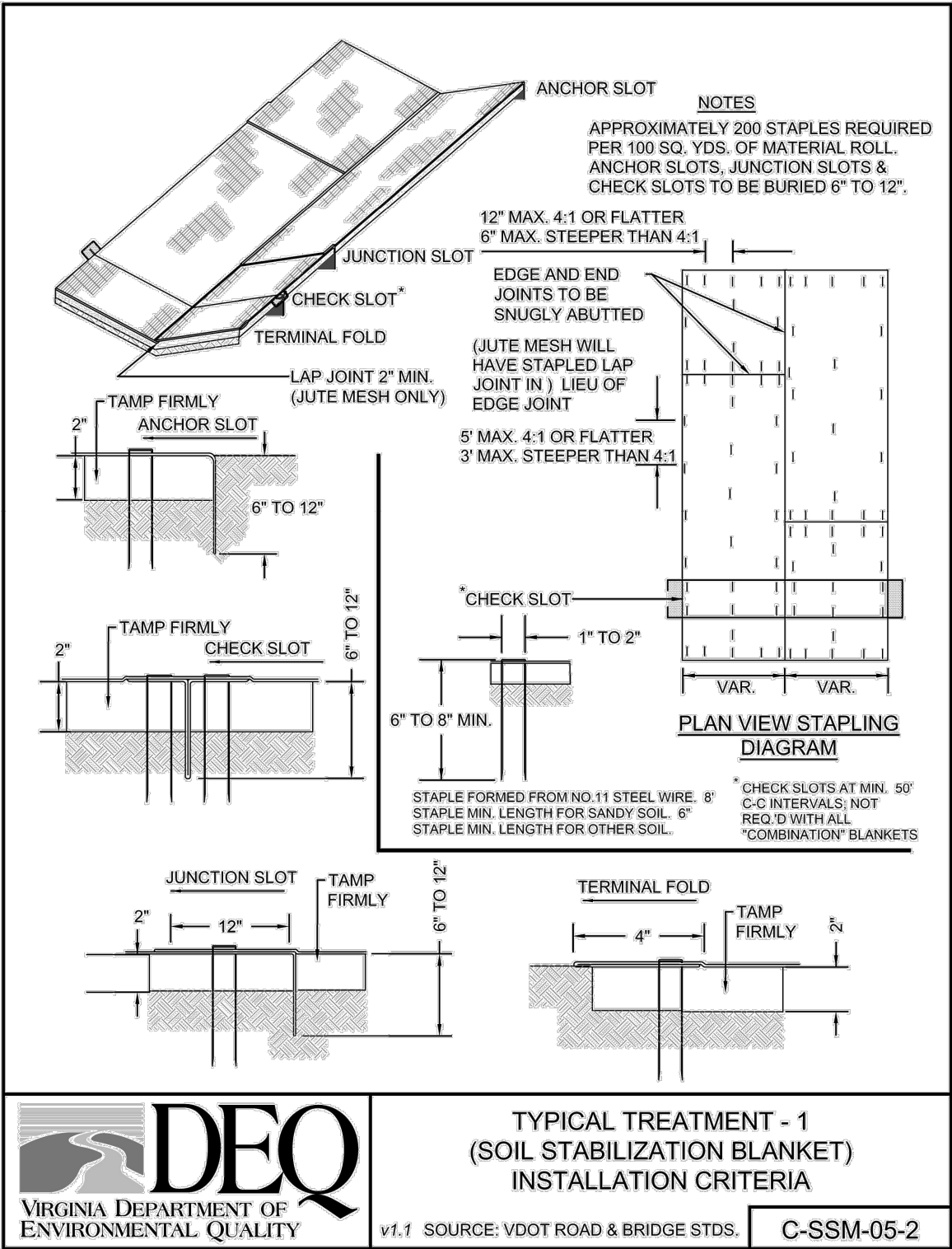


ESC SECURITY FENCE TYP. DETAIL

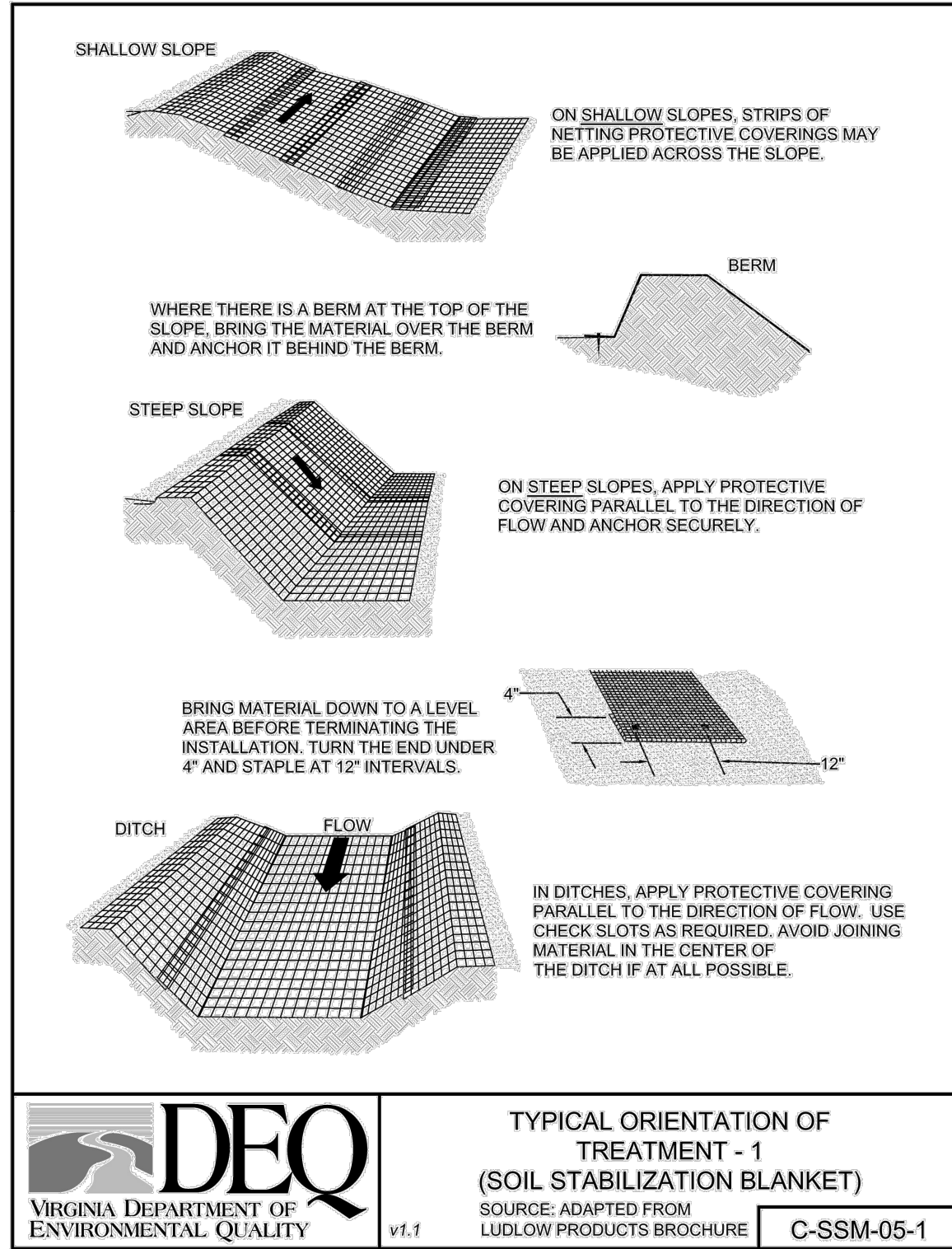
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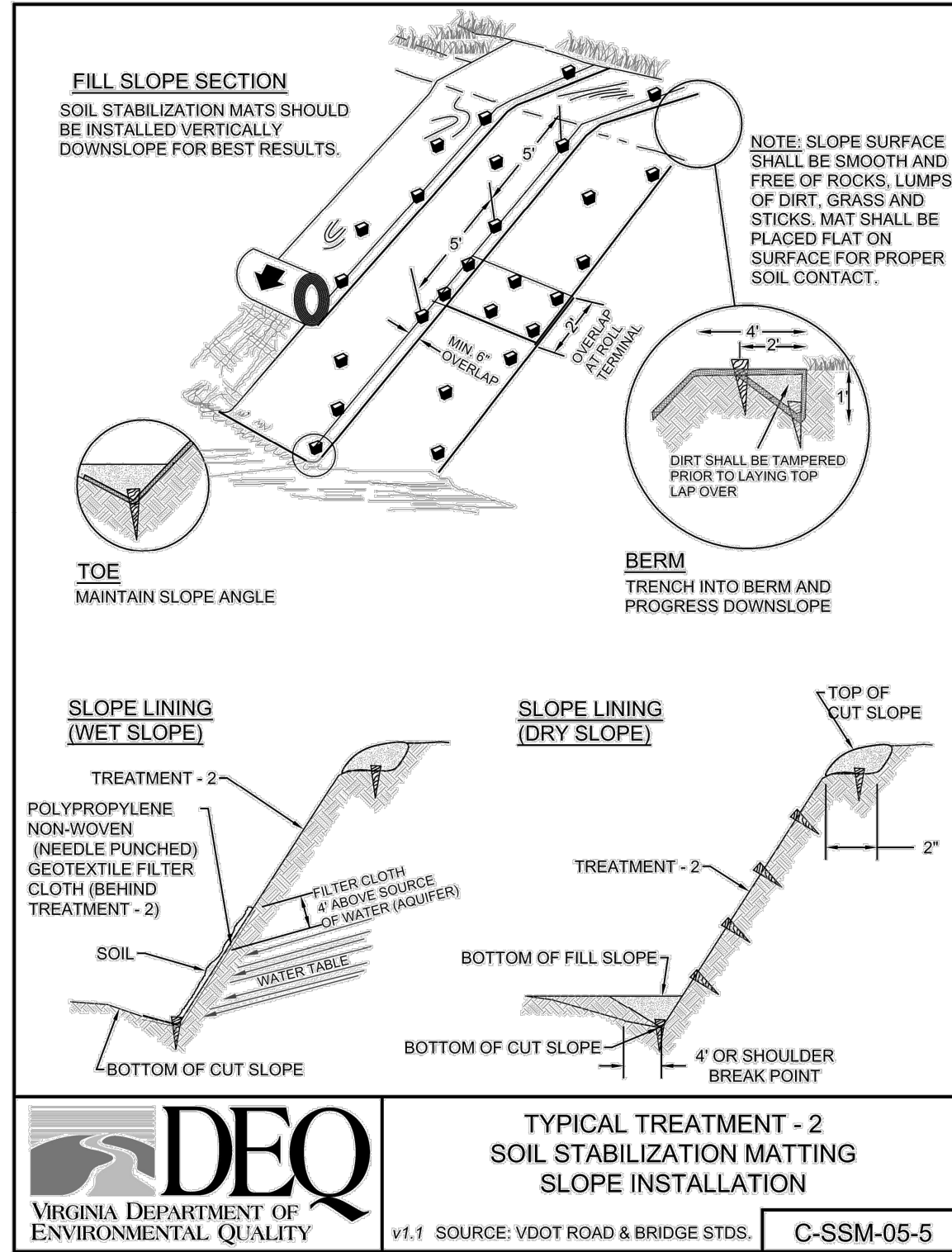
TYPICAL TREATMENT - 2
SOIL STABILIZATION
MATTING INSTALLATION
v1.1 SOURCE: VDOT ROAD & BRIDGE STDS. C-SSM-05-4



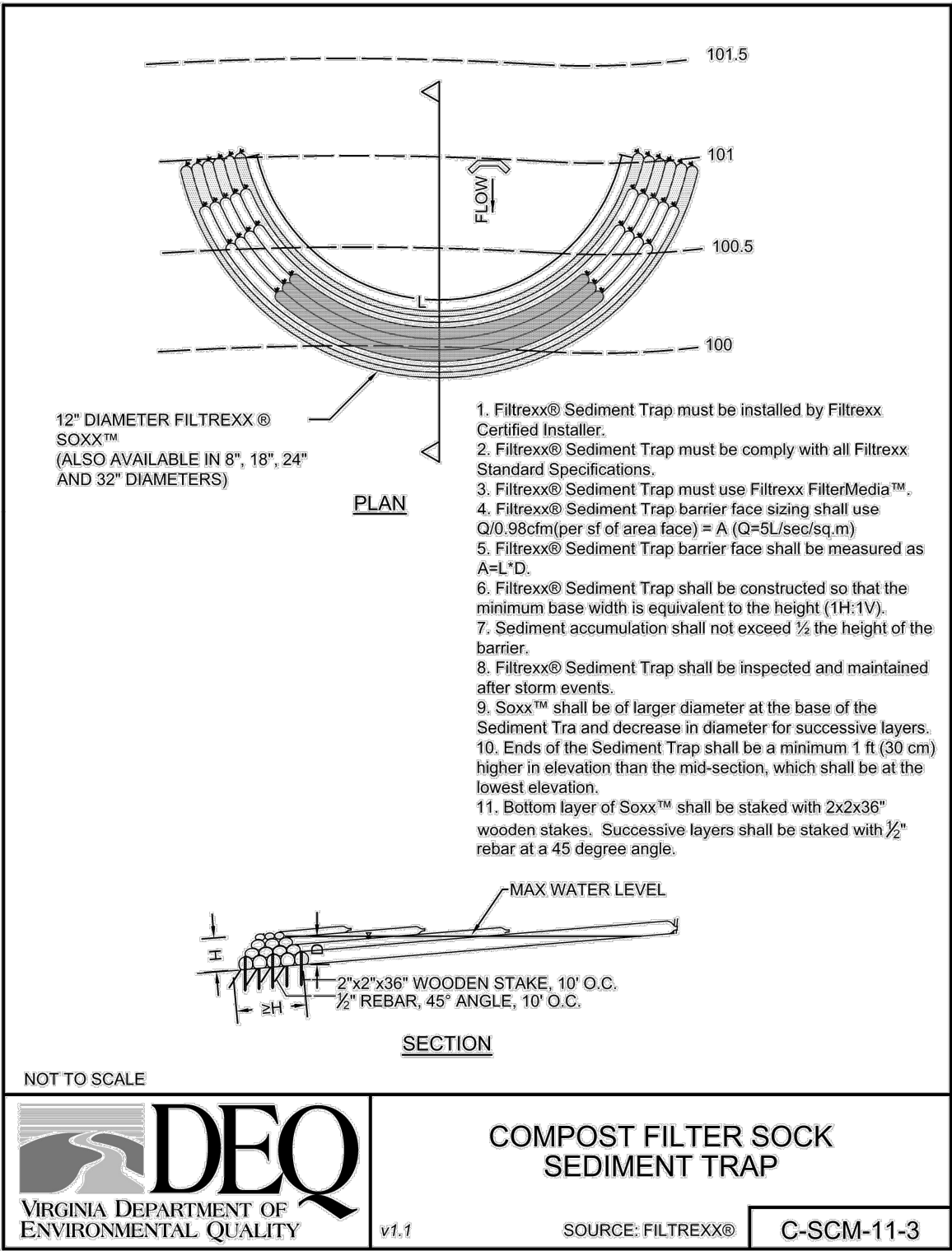
TYPICAL TREATMENT - 1
(SOIL STABILIZATION BLANKET)
INSTALLATION CRITERIA
v1.1 SOURCE: VDOT ROAD & BRIDGE STDS. C-SSM-05-2



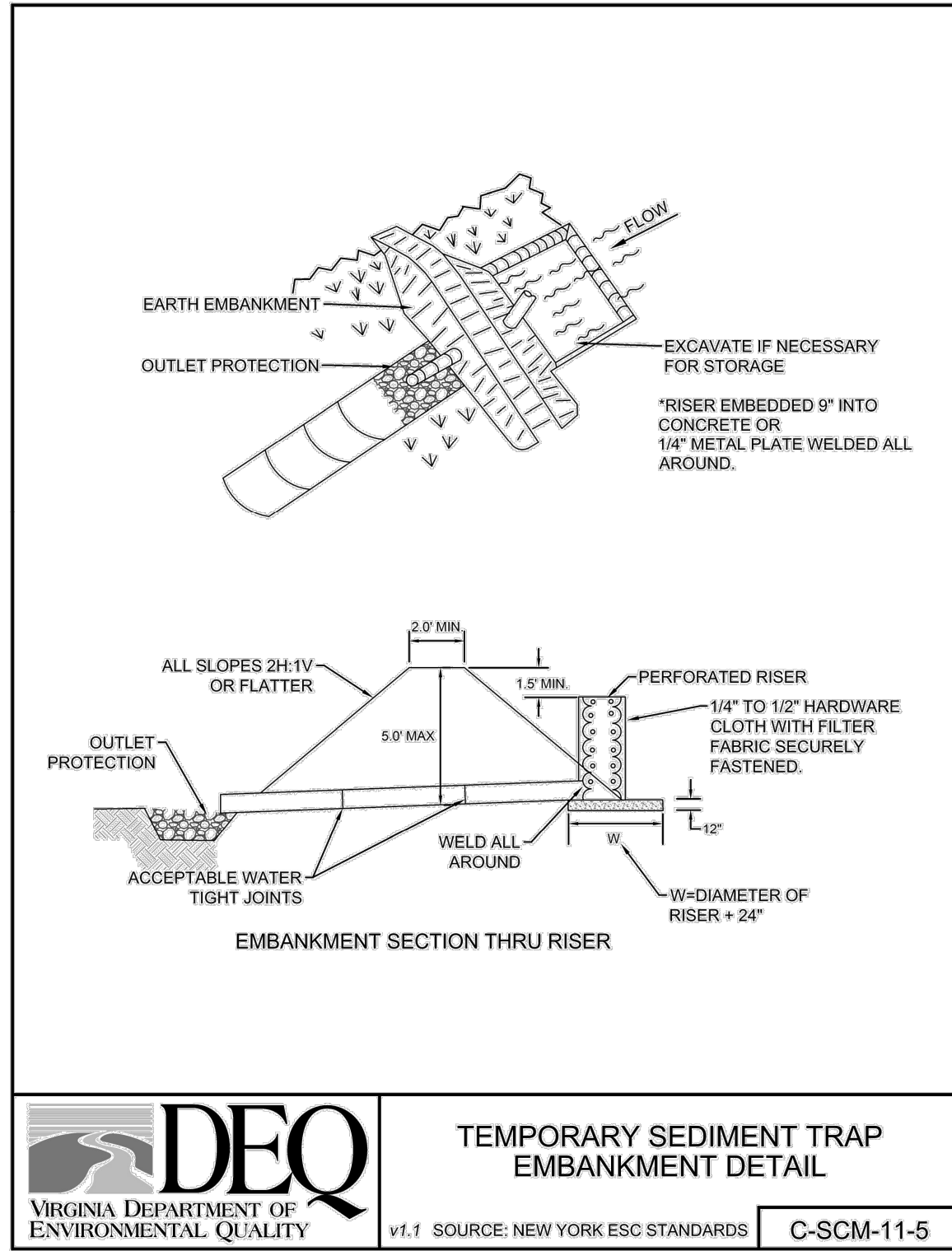
TYPICAL ORIENTATION OF
TREATMENT - 1
(SOIL STABILIZATION BLANKET)
v1.1 SOURCE: ADAPTED FROM LUDLOW PRODUCTS BROCHURE C-SSM-05-1



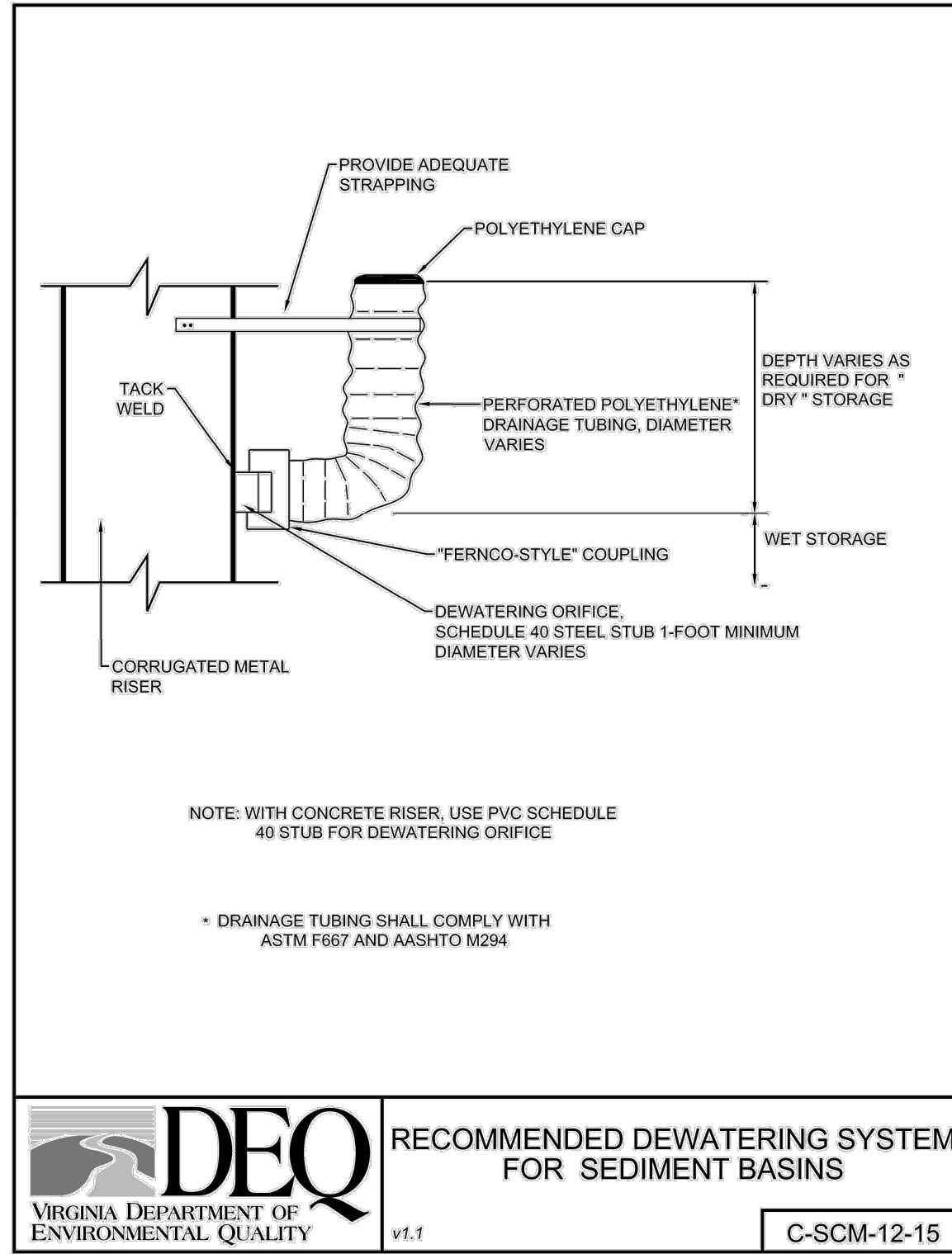
TYPICAL TREATMENT - 2
SOIL STABILIZATION MATTING
INSTALLATION
v1.1 SOURCE: VDOT ROAD & BRIDGE STDS. C-SSM-05-5



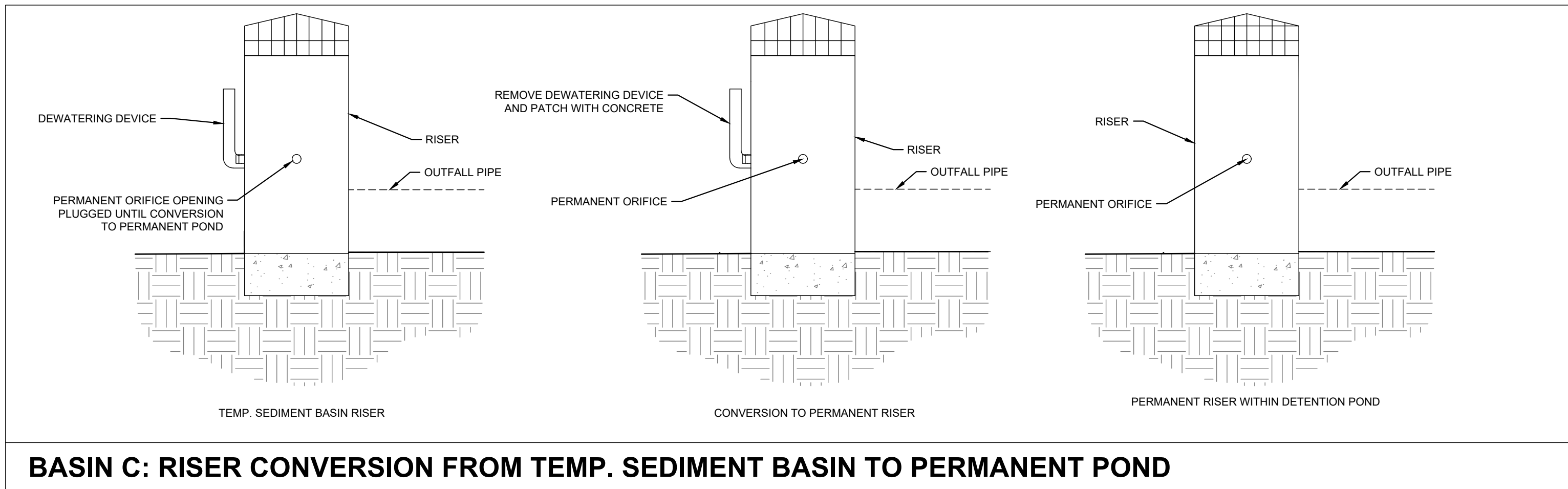
COMPOST FILTER SOCK
SEDIMENT TRAP
v1.1 SOURCE: FILTREXX® C-SCM-11-3



TEMPORARY SEDIMENT TRAP
EMBANKMENT DETAIL
v1.1 SOURCE: NEW YORK ESC STANDARDS C-SCM-11-5



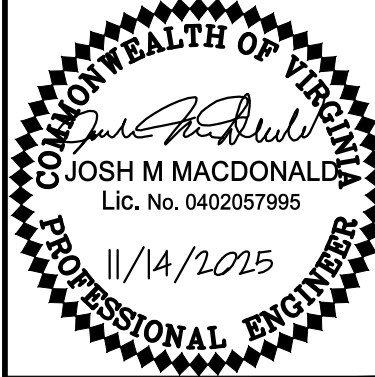
RECOMMENDED DEWATERING SYSTEM
FOR SEDIMENT BASINS
v1.1 C-SCM-12-15



BASIN C: RISER CONVERSION FROM TEMP. SEDIMENT BASIN TO PERMANENT POND

CULVERT RIPRAP OUTLET PROTECTION SUMMARY															
OUTFALL NO.	OUTLET PIPE DIAMETER (D _o)	10-YR PEAK DISCHARGE	TAILWATER CONDITION	APRON (PER BARREL)			BARREL		TOTAL APRON				STONE		
				APRON LENGTH (L _a)	UPSTREAM WIDTH (3D _o)	DOWN-STREAM WIDTH (W)	NUMBER OF BARRELS	BARREL SPACING	APRON LENGTH (L _a)	UPSTREAM WIDTH (3D _o)	DOWN-STREAM WIDTH (W)	AREA OF APRON	STONE DIAMETER (d ₅₀)	THICKNESS OF STONE (T)	APPROX. STONE QUANTITY
				FT	FT	FT	EA	FT	FT	FT	FT	SF	FT	FT	CY
CU-102	24	13.0	MIN	11.0	6.0	13.0	1	FT	11.0	6.0	13.0	105	0.5	1.0	4
CU-202	24	8.6	MIN	9.0	6.0	11.0	1	FT	9.0	6.0	11.0	77	0.5	1.0	3

DITCH RIPRAP OUTLET PROTECTION SUMMARY													
OUTFALL NO.	10-YR Flow Depth (D _o)	10-YR VELOCITY	TAILWATER CONDITION	APRON			APRON LENGTH (L _a)	UPSTREA M WIDTH (3D _o)	DOWN-STREAM WIDTH (W)	TOTAL APRON			STONE DIAMETER (d ₅₀)
				APRON LENGTH (L _a)	UPSTREAM WIDTH (3D _o)	DOWN-STREAM WIDTH (W)				APRON LENGTH (L _a)	UPSTREAM WIDTH (3D _o)	DOWN-STREAM WIDTH (W)	
				FT	FT	FT				FT	FT	FT	
SCC-06	14	10.6	MIN	23.0	3.5	26.5	23.0	3.5	26.5	344	0.2	0.5	6



KHA PROJECT	113708001	DATE	11/14/2025	SCALE	AS SHOWN	DESIGNED BY	STM	STW	JMM
DRAWN BY		CHECKED BY							

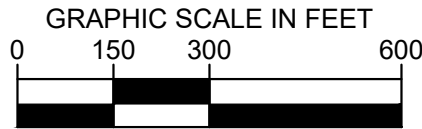
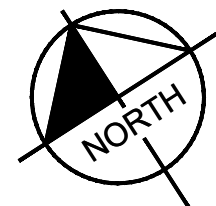
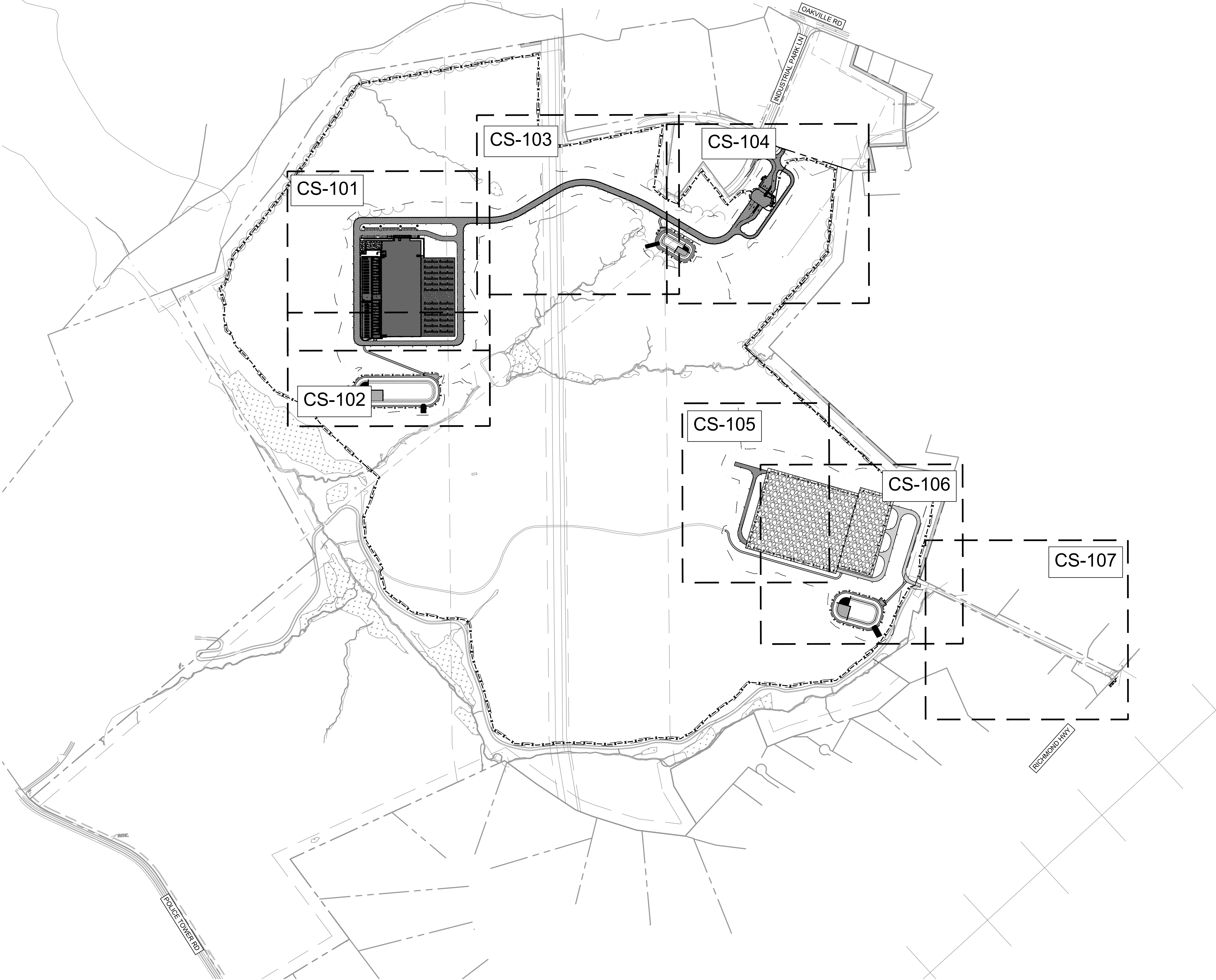
EROSION AND
SEDIMENT CONTROL
DETAILS

PROJECT HERCULES
APPOMATTOX COUNTY
VA

SHEET NUMBER
CE-504

Jacobs
Kimley»Horn
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6806 PARAGON PLACE, SUITE 310, RICHMOND, VA 23230
PHONE: 804-673-3882
WWW.KIMLEY-HORN.COM

Plotted By: McCray, Stephen Sheet Set: KHA Layout: CS-100 SITE PLAN November 05, 2025 04:25:38pm
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SITE LEGEND

- ASPHALT PAVEMENT (HEAVY DUTY PAVEMENT)
SEE APPROVED GEOTECHNICAL REPORT
- CONCRETE SIDEWALK
SEE DETAIL ON SHEET CS-501
- STANDARD DUTY CONCRETE
SEE APPROVED GEOTECHNICAL REPORT
- HEAVY DUTY CONCRETE
SEE APPROVED GEOTECHNICAL REPORT
- VDOT STD. WP-2
- GRAVEL SUBSTATION & EQUIPMENT PAD
SEE SECTIONS ON SHEET CS-501
- GRAVEL GENERATOR YARD
SEE SECTION ON SHEET CS-501
- GRAVEL ACCESS ROAD
SEE SECTION ON SHEET CS-501
- LIMITS OF DISTURBANCE
- 6' CHAINLINK POND SAFETY FENCE

SITE NOTES

- ALL CURB RADII ARE 5.0' UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- ALL LIGHTING TO BE INSTALLED 5' BEHIND CURB AND CENTERED ON PAVEMENT STRIPING UNLESS NOTED OTHERWISE.
- THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL STOP SIGNS, DIRECTIONAL SIGNS, AND STRIPING SHOWN ON THE PLANS.
- REFER TO SHEETS CS-501 THROUGH CS-502 FOR DETAILS.

TRANSCONTINENTAL GAS PIPELINE RIGHT-OF-WAY WORK NOTES

- ONSITE: AN AUTHORIZED WILLIAMS REPRESENTATIVE MUST BE ON SITE PRIOR TO AND DURING ANY SURFACE DISTURBING WORK WITHIN THE TRANSCONTINENTAL GAS PIPELINE RIGHT-OF-WAY. THE AUTHORIZED COMPANY WILL ASSIST IN DETERMINING THE LOCATION OF THE PIPELINES, THE ROW WIDTH, AND THE EXISTING COVER OVER THE PIPELINE AND WILL REMAIN ON SITE TO MONITOR ALL ACTIVITIES WITHIN THE ROW.
- VIBRATORY EQUIPMENT: VIBRATORY EQUIPMENT IS PROHIBITED WITHIN THE LIMITS OF THE COMPANY ROW. VIBRATORY EQUIPMENT IS NOT PERMITTED TO BE USED FOR ACHIEVING APPLICABLE COMPACTION REQUIREMENTS.
- EXCAVATION: NO MACHINE EXCAVATION ALLOWED WITHIN 2 FEET OF ANY COMPANY PIPELINE. REMOVE SIDE CUTTERS FROM THE BUCKET, WELD OR ATTACH A BAR ACROSS THE TEETH.
- CROSSING ANGLE: ROADS AND UTILITIES SHALL CROSS AS CLOSE TO 90° AS POSSIBLE.
- NO HORIZONTAL OR VERTICAL BENDS ARE PERMITTED WITHIN COMPANY ROW.

PROJECT HERCULES

OVERALL SITE PLAN

VA

APPOMATTOX COUNTY

SHEET NUMBER

CS-100

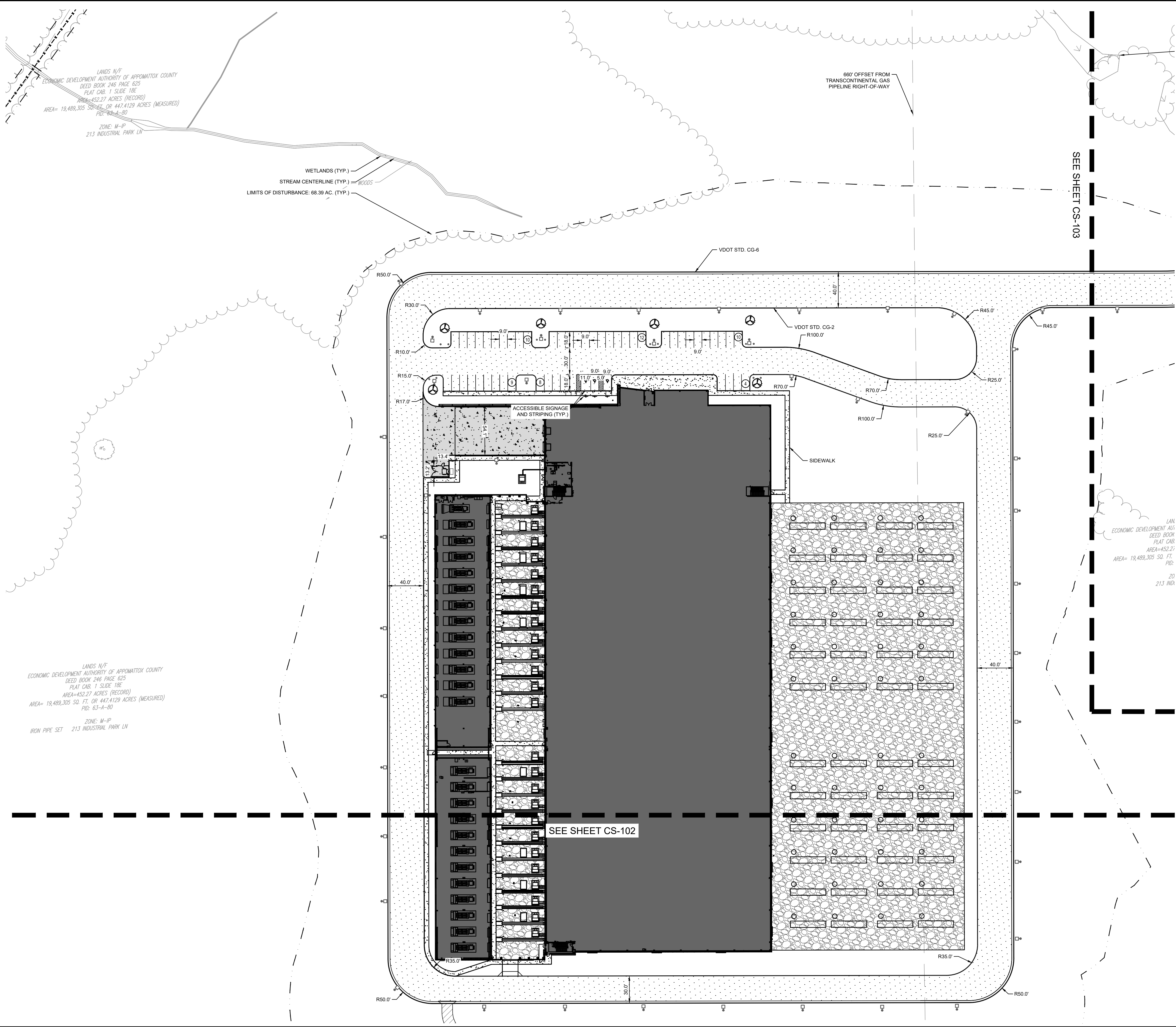
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PHONE: 804-673-8882
WWW.KIMLEY-HORN.COM

COMMONWEALTH OF VIRGINIA

JOSH M. MACDONALD
Lic. No. 0402057995
11/14/2025
PROFESSIONAL ENGINEER

KHA PROJECT	113706001	DATE	11/14/2025	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
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Plotted By: McGraw, Stephen Sheet Set: Khs Layout: CS-101 SITE PLAN November 05, 2025 04:26:01 pm
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- TRANSCONTINENTAL GAS PIPELINE RIGHT-OF-WAY WORK NOTES**
- ON-SITE: AN AUTHORIZED WILLIAMS REPRESENTATIVE MUST BE ON SITE PRIOR TO AND DURING ANY SURFACE DISTURBING WORK WITHIN THE TRANSCONTINENTAL GAS PIPELINE RIGHT-OF-WAY. THE AUTHORIZED COMPANY WILL ASSIST IN DETERMINING THE LOCATION OF THE PIPELINES, THE ROW WIDTH, AND THE EXISTING COVER OVER THE PIPELINE AND WILL REMAIN ON SITE TO MONITOR ALL ACTIVITIES WITHIN THE ROW.
 - VIBRATORY EQUIPMENT: VIBRATORY EQUIPMENT IS PROHIBITED WITHIN THE LIMITS OF THE COMPANY ROW. VIBRATORY EQUIPMENT IS NOT PERMITTED TO BE USED FOR ACHIEVING APPLICABLE COMPACTION REQUIREMENTS.
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 - CROSSING ANGLE: ROADS AND UTILITIES SHALL CROSS AS CLOSE TO 90° AS POSSIBLE.
 - NO HORIZONTAL OR VERTICAL BENDS ARE PERMITTED WITHIN COMPANY ROW.

PARKING COUNT	
PARKING REQUIRED (1 SPACE PER 2 EMPLOYEES, MAX 60 EMPLOYEES PER SHIFT):	30 SPACES
PARKING PROVIDED:	53 (3 ADA)

KHA PROJECT	DATE	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
113706001	11/14/2025								

PROJECT HERCULES

SITE PLAN

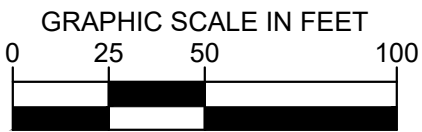
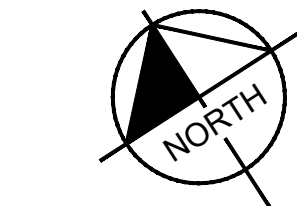
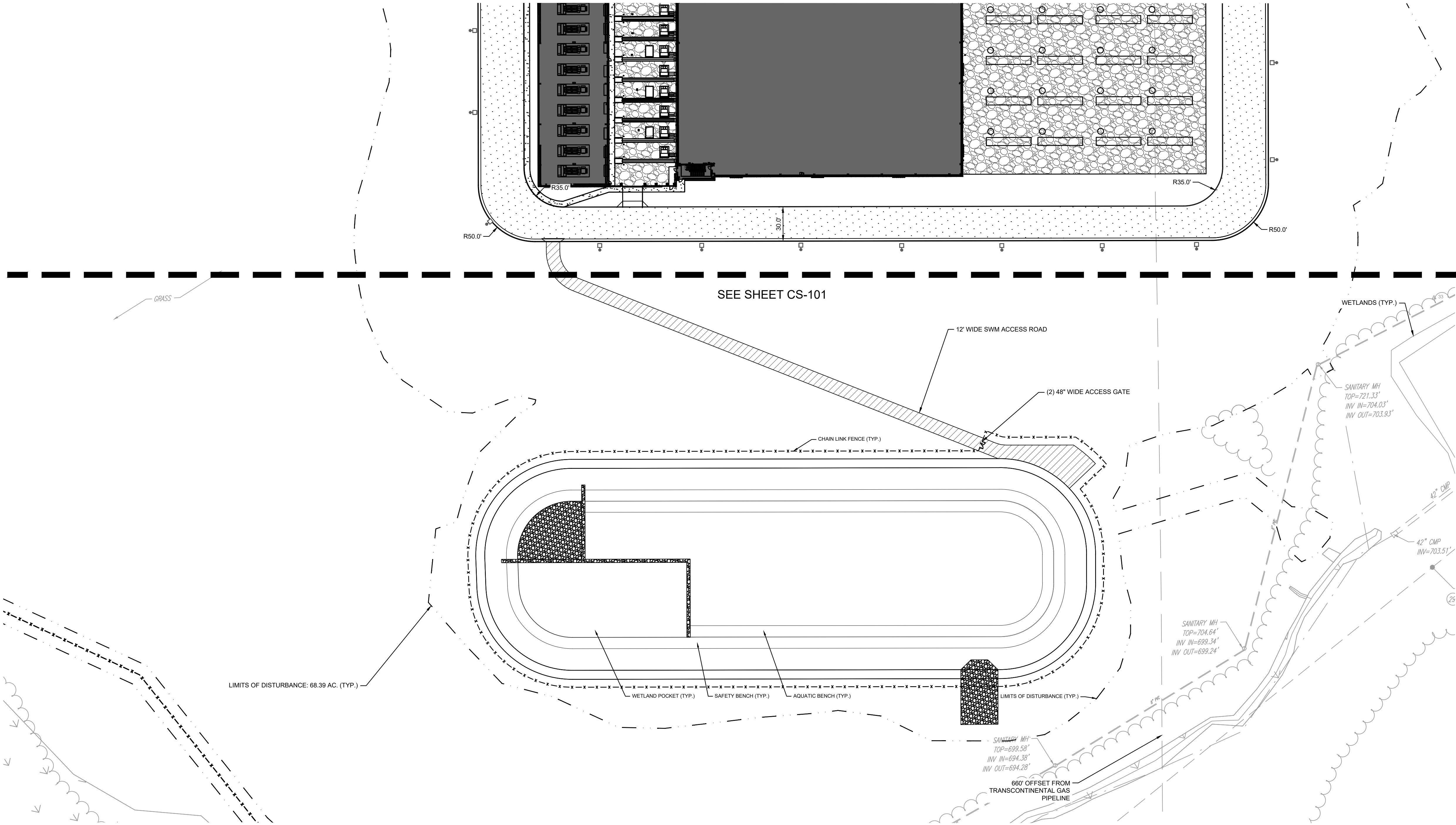
SHEET NUMBER

CS-101

APPOMATTOX COUNTY

VA

Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CS-102 SITE PLAN November 05, 2025 04:26:24pm
This document, together with the concepts and designs presented herein, is an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



SITE LEGEND

- ASPHALT PAVEMENT (HEAVY DUTY PAVEMENT)
SEE APPROVED GEOTECHNICAL REPORT
- CONCRETE SIDEWALK
SEE DETAIL ON SHEET CS-501
- STANDARD DUTY CONCRETE
SEE APPROVED GEOTECHNICAL REPORT
- HEAVY DUTY CONCRETE
SEE APPROVED GEOTECHNICAL REPORT
- VDOT STD. WP-2
- GRAVEL SUBSTATION & EQUIPMENT PAD
SEE SECTIONS ON SHEET CS-501
- GRAVEL GENERATOR YARD
SEE SECTION ON SHEET CS-501
- GRAVEL ACCESS ROAD
SEE SECTION ON SHEET CS-501
- LIMITS OF DISTURBANCE
- 6' CHAINLINK POND SAFETY FENCE

SITE NOTES

- ALL CURB RADII ARE 5.0' UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- ALL LIGHTING TO BE INSTALLED 5' BEHIND CURB AND CENTERED ON PAVEMENT STRIPING UNLESS NOTED OTHERWISE.
- THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL STOP SIGNS, DIRECTIONAL SIGNS, AND STRIPING SHOWN ON THE PLANS.
- REFER TO SHEETS CS-501 THROUGH CS-502 FOR DETAILS.

TRANSCONTINENTAL GAS PIPELINE RIGHT-OF-WAY WORK NOTES

- ONSITE: AN AUTHORIZED WILLIAMS REPRESENTATIVE MUST BE ON SITE PRIOR TO AND DURING ANY SURFACE DISTURBING WORK WITHIN THE TRANSCONTINENTAL GAS PIPELINE RIGHT-OF-WAY. THE AUTHORIZED COMPANY WILL ASSIST IN DETERMINING THE LOCATION OF THE PIPELINES, THE ROW WIDTH, AND THE EXISTING COVER OVER THE PIPELINE AND WILL REMAIN ON SITE TO MONITOR ALL ACTIVITIES WITHIN THE ROW.
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6806 PARAGON PLACE, SUITE 310, RICHMOND, VA 23230
PHONE: 804-673-8882
WWW.KIMLEY-HORN.COM

KHA PROJECT	113706001	DATE	11/14/2025	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
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PROJECT HERCULES

APPOMATTOX COUNTY

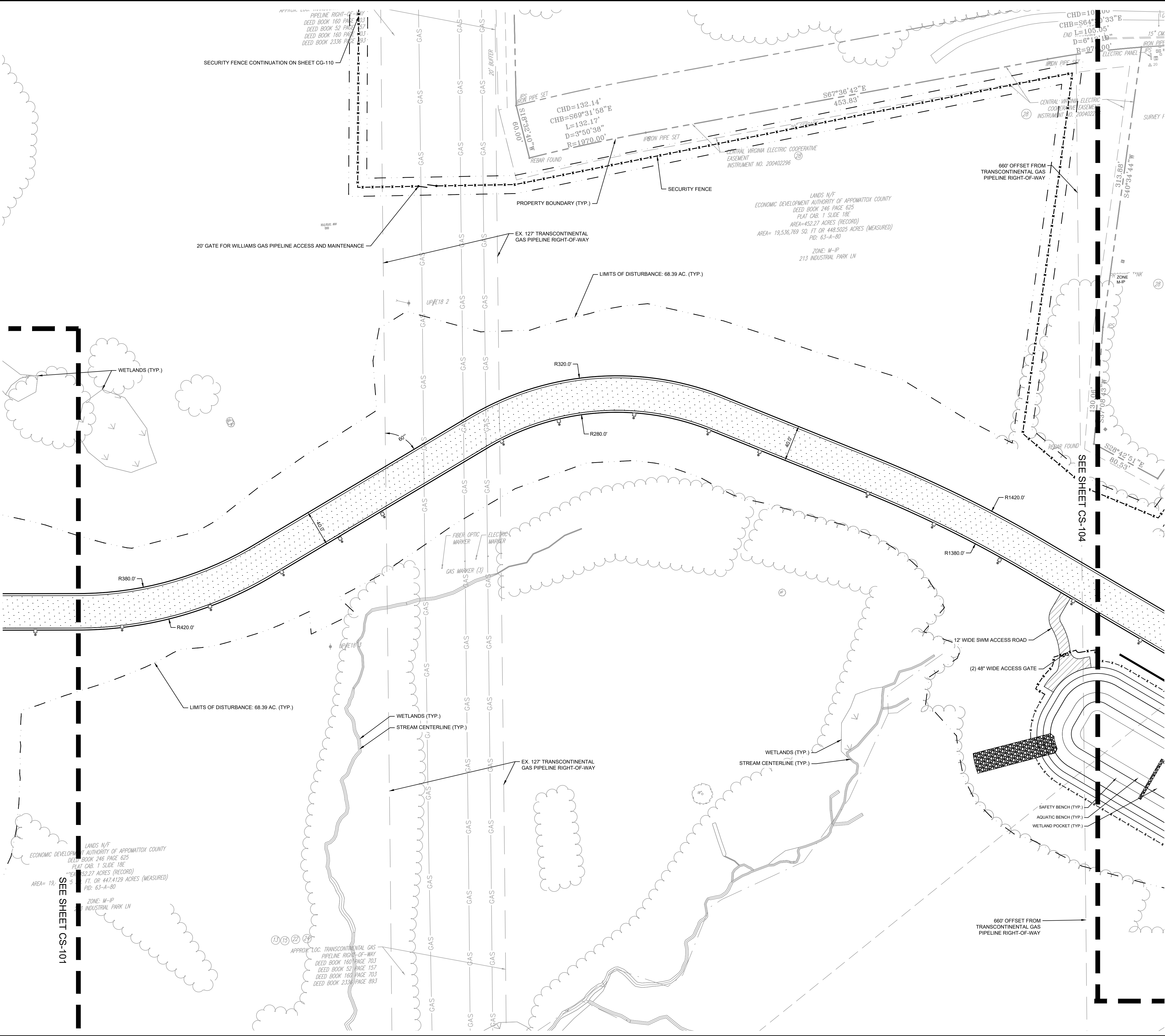
VA

SITE PLAN

SHEET NUMBER

CS-102

Plotted By: McCray, Stephen Sheet Set: KHA Layout: CS-103 SITE PLAN November 05, 2025 04:26:45pm
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SITE LEGEND

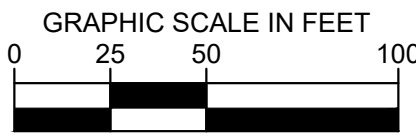
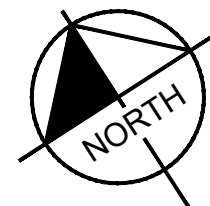
- ASPHALT PAVEMENT (HEAVY DUTY PAVEMENT)
SEE APPROVED GEOTECHNICAL REPORT
- CONCRETE SIDEWALK
SEE DETAIL ON SHEET CS-501
- STANDARD DUTY CONCRETE
SEE APPROVED GEOTECHNICAL REPORT
- HEAVY DUTY CONCRETE
SEE APPROVED GEOTECHNICAL REPORT
- VDOT STD. WP-2
- GRAVEL SUBSTATION & EQUIPMENT PAD
SEE SECTIONS ON SHEET CS-501
- GRAVEL GENERATOR YARD
SEE SECTION ON SHEET CS-501
- GRAVEL ACCESS ROAD
SEE SECTION ON SHEET CS-501
- LIMITS OF DISTURBANCE
- 6' CHAINLINK POND SAFETY FENCE

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Jacobs

Kimley»Horn

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6806 PARAGON PLACE, SUITE 310, RICHMOND, VA 23230
PHONE: 804-673-8882
WWW.KIMLEY-HORN.COM

COMMONWEALTH OF VIRGINIA
JOSH M. MACDONALD
Lic. No. 0402057995
11/14/2025
PROFESSIONAL ENGINEER

KHA PROJECT	113706001	DATE	11/11/2025	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
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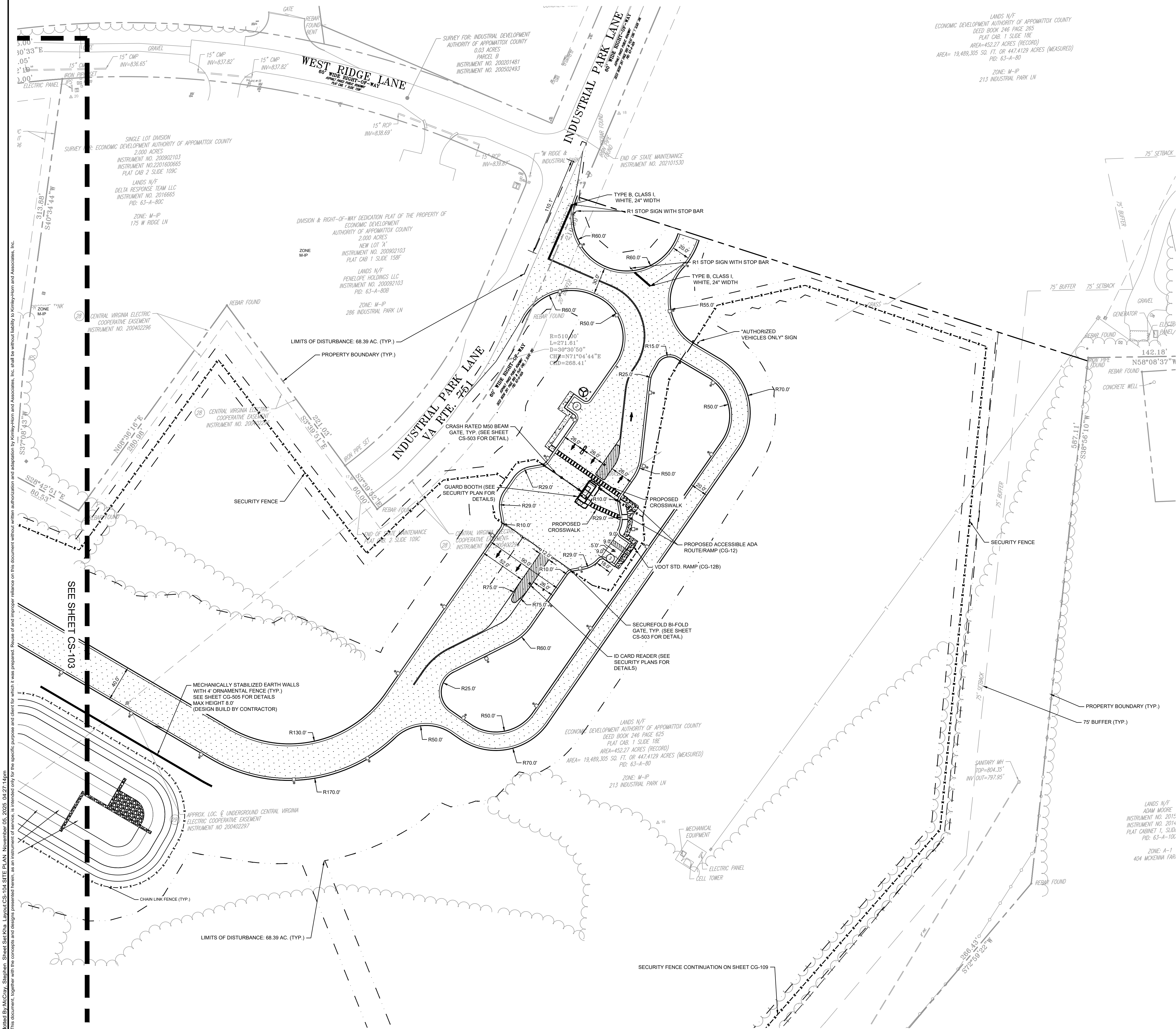
SITE PLAN

PROJECT HERCULES

VA

SHEET NUMBER
CS-103

APPOMATTOX COUNTY

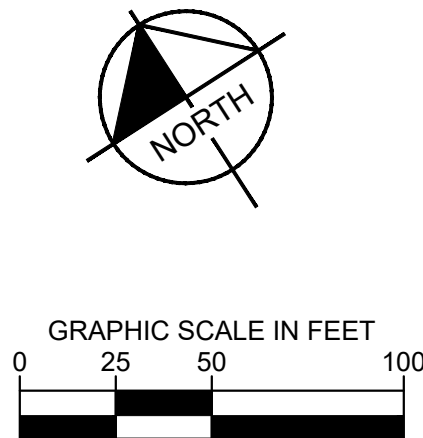


SITE LEGEND

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SEE APPROVED GEOTECHNICAL REPORT
- CONCRETE SIDEWALK
SEE DETAIL ON SHEET CS-501
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KHA PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
113706001	11/14/2025	AS SHOWN	STM	STM	JMM

SITE PLAN

PROJECT HERCULES

SHEET NUMBER
CS-104

VA

APPOMATTOX COUNTY



LANDS N/F
ECONOMIC DEVELOPMENT AUTHORITY OF APPOMATTOX COUNTY
DEED BOOK 246 PAGE 625
PLAT CAR. 1 SLIDE 18E
AREA=452.27 ACRES (RECORD)
AREA= 19,489,305 SQ. FT. OR 447.4129 ACRES (MEASURED)
PID: 63-A-80

ZONE: M-IP
213 INDUSTRIAL PARK LN

— LIMITS OF DISTURBANCE: 68.39 AC. (TYP.

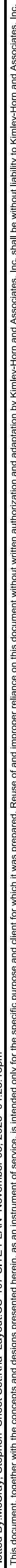
SUBSTATION
EQUIPMENT AREA

SEE SHEET CS-106

GATE ACCESS CONTROLS
(DESIGN BY OTHERS)

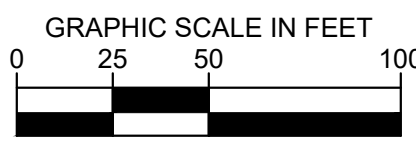
ECONOMIC DEVELOPMENT AUTHORITY OF APPROXIMATELY
DEED BOOK 246 PAGE 0291
PLAT CAB. 1 SLIDE 18E
AREA=52.21 ACRES (RECORD)
ADFA= 19.489,305 SQ. FT. OR 447.429 ACRES (MEASURED)
NCE: 68.39 AC. (TYP.) PID: 63-A-00

ZONE: M-IP
213 INDUSTRIAL PARK LN



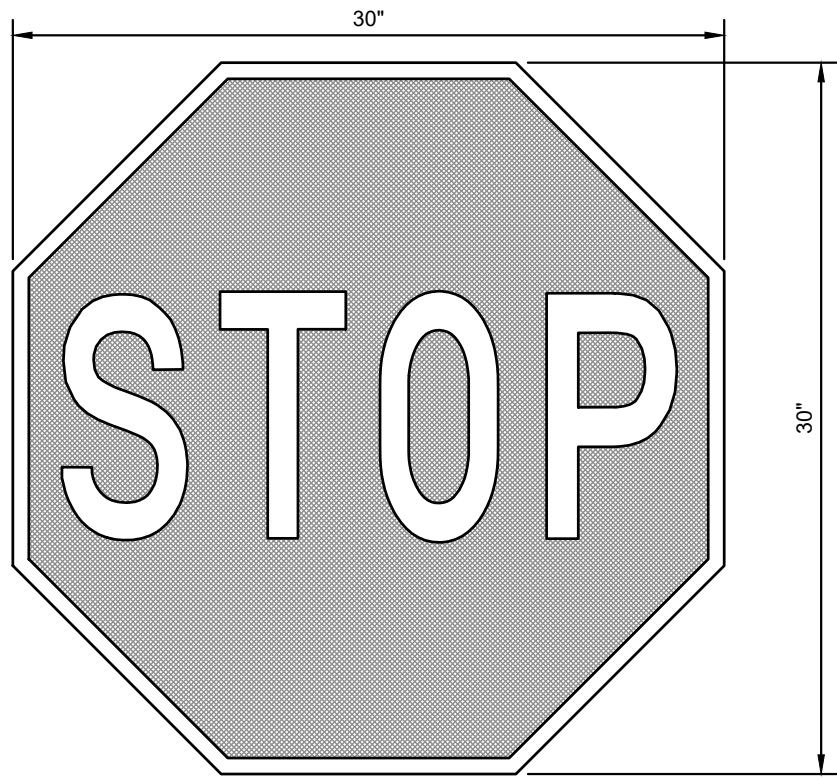
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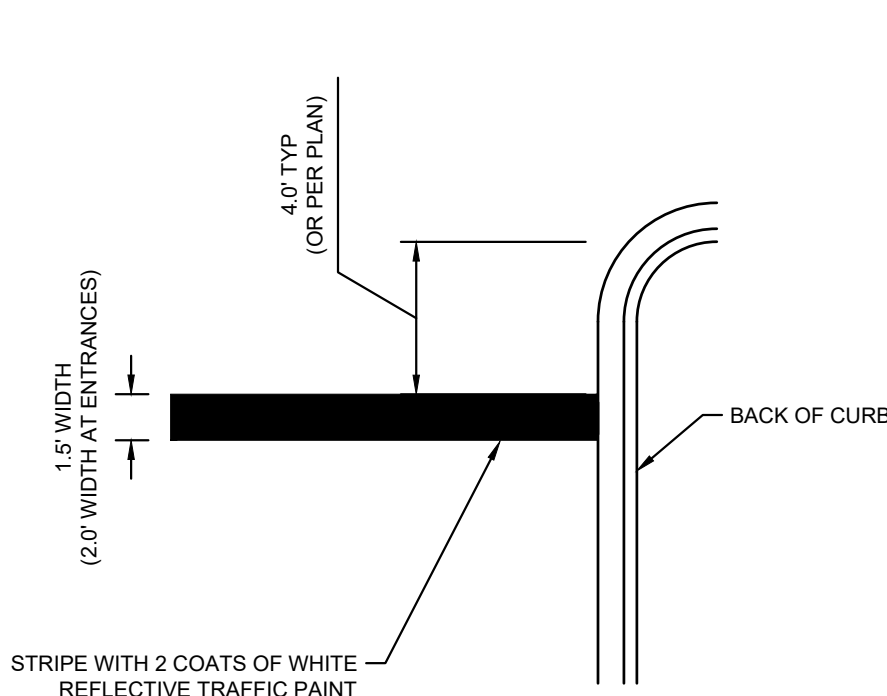


SHEET NUMBER CS-107		PROJECT HERCULES APPOMATTOX COUNTY VA		SITE PLAN		<table border="1"> <tr> <td>KHA PROJECT 113706001</td> <td>DATE 11/14/2025</td> <td>SCALE AS SHOWN</td> <td>DESIGNED BY STM</td> <td>DRAWN BY STM</td> <td>CHECKED BY JMM</td> </tr> </table>		KHA PROJECT 113706001	DATE 11/14/2025	SCALE AS SHOWN	DESIGNED BY STM	DRAWN BY STM	CHECKED BY JMM			© 2025 KIMLEY-HORN AND ASSOCIATES, INC. 6806 PARAGON PLACE, SUITE 310, RICHMOND, VA 23230 PHONE: 804-673-3882 WWW.KIMLEY-HORN.COM			
KHA PROJECT 113706001	DATE 11/14/2025	SCALE AS SHOWN	DESIGNED BY STM	DRAWN BY STM	CHECKED BY JMM														

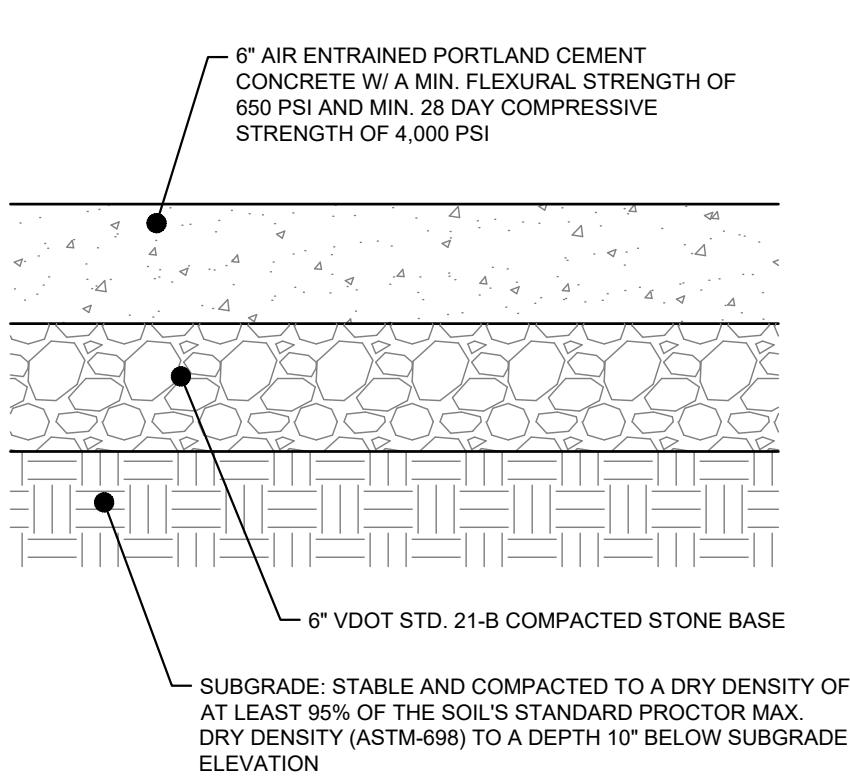
Plotted By:McGray, Stephen Sheet Set:Kha Layout:CS-501 SITE DETAILS November 05, 2025 04:28:24pm
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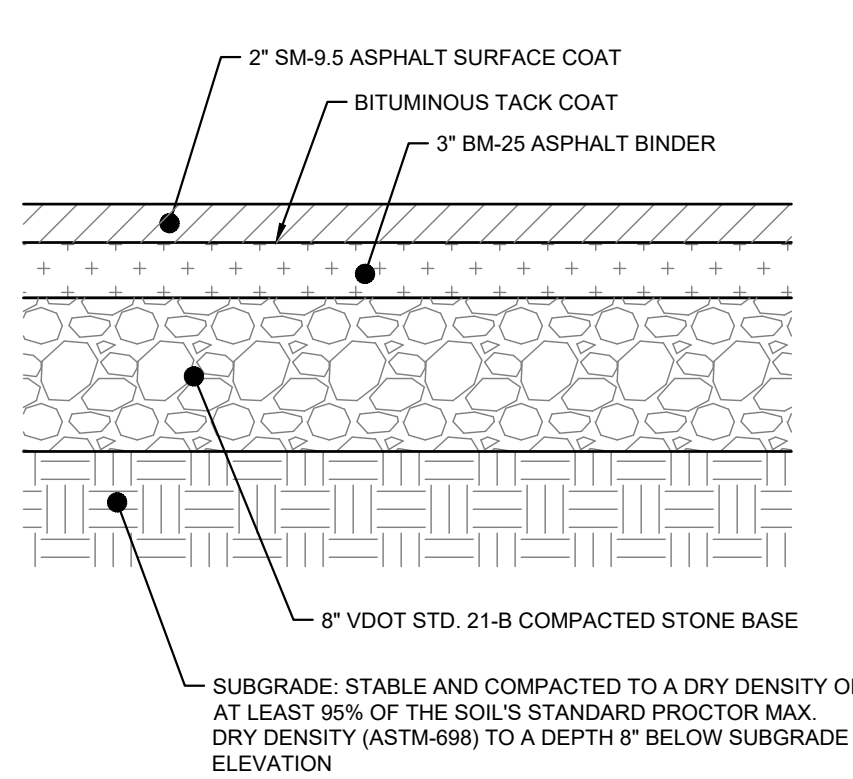
STOP SIGN (R1-1)



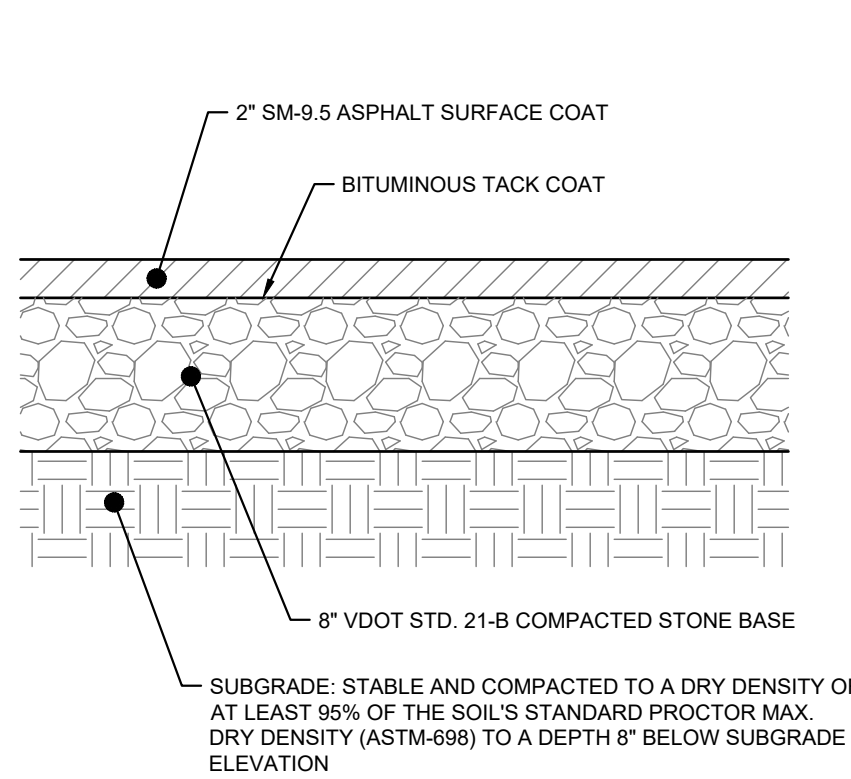
STOP BAR STRIPING



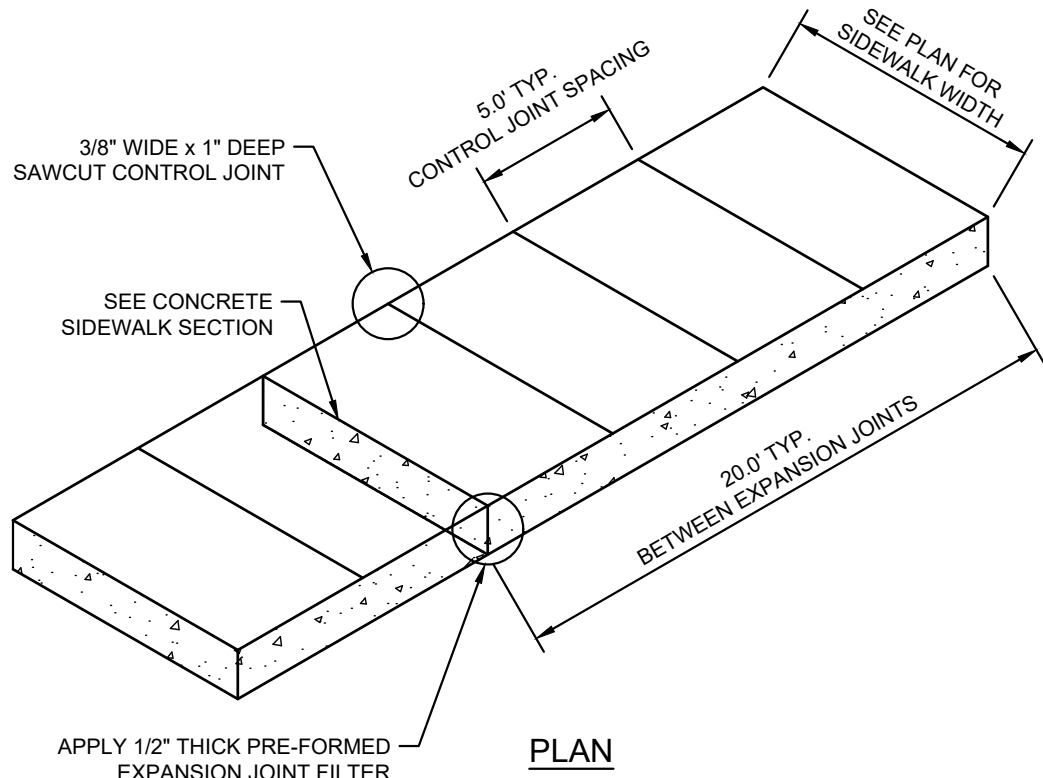
HEAVY DUTY CONCRETE



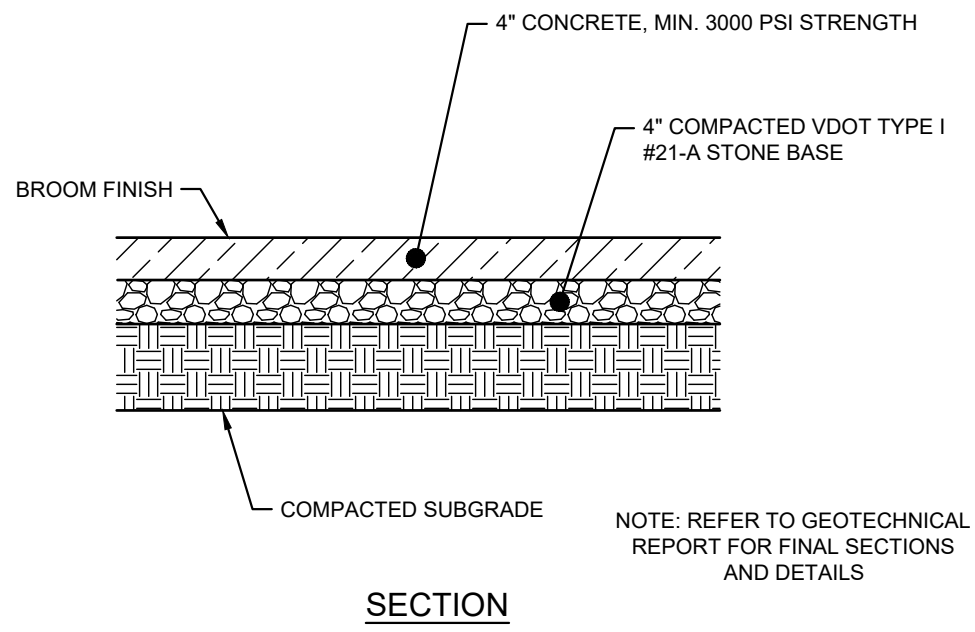
HEAVY DUTY PAVEMENT



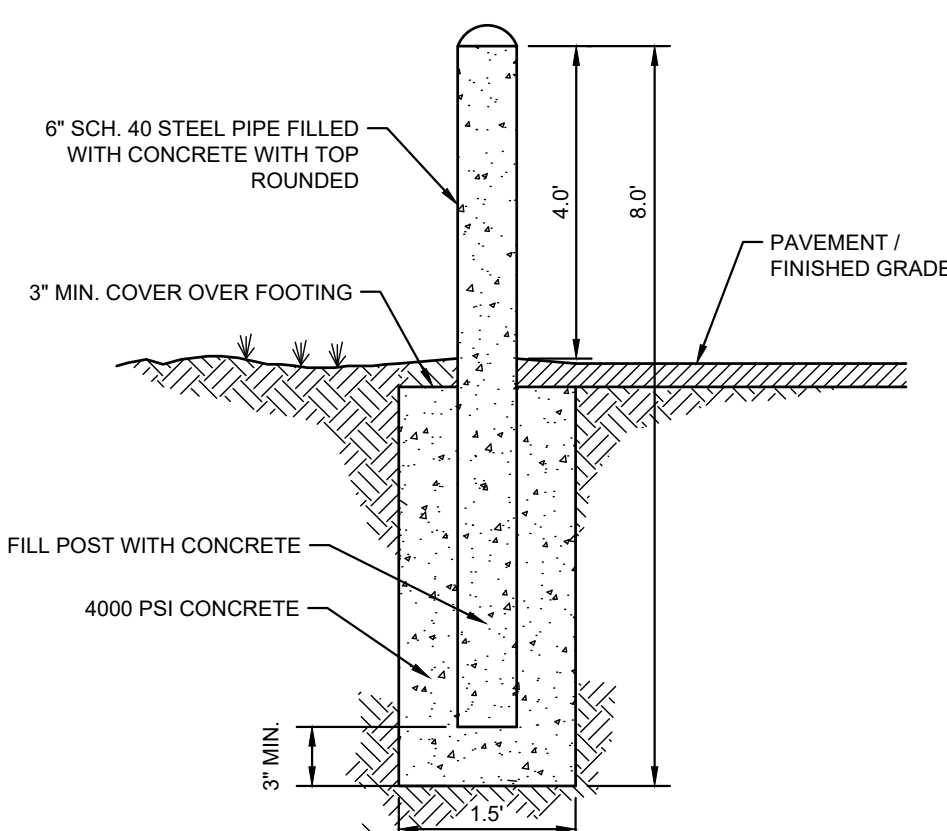
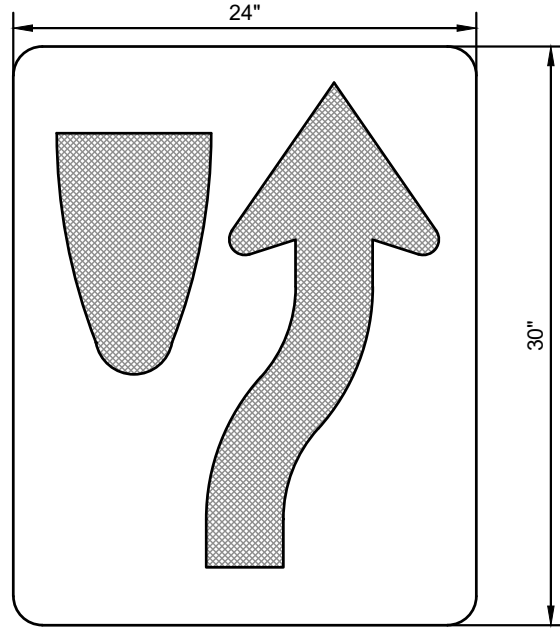
LIGHT DUTY PAVEMENT



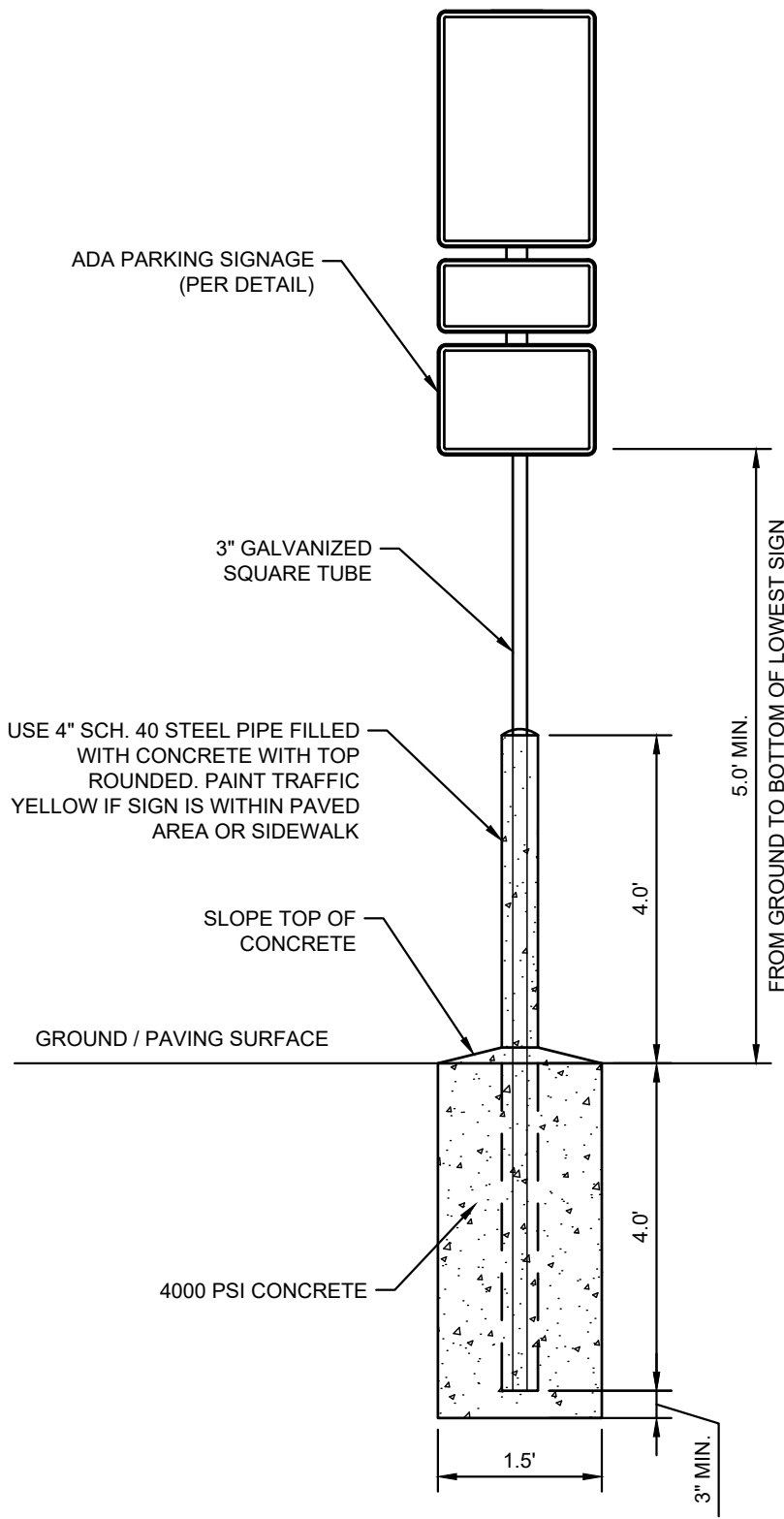
CONCRETE SIDEWALK



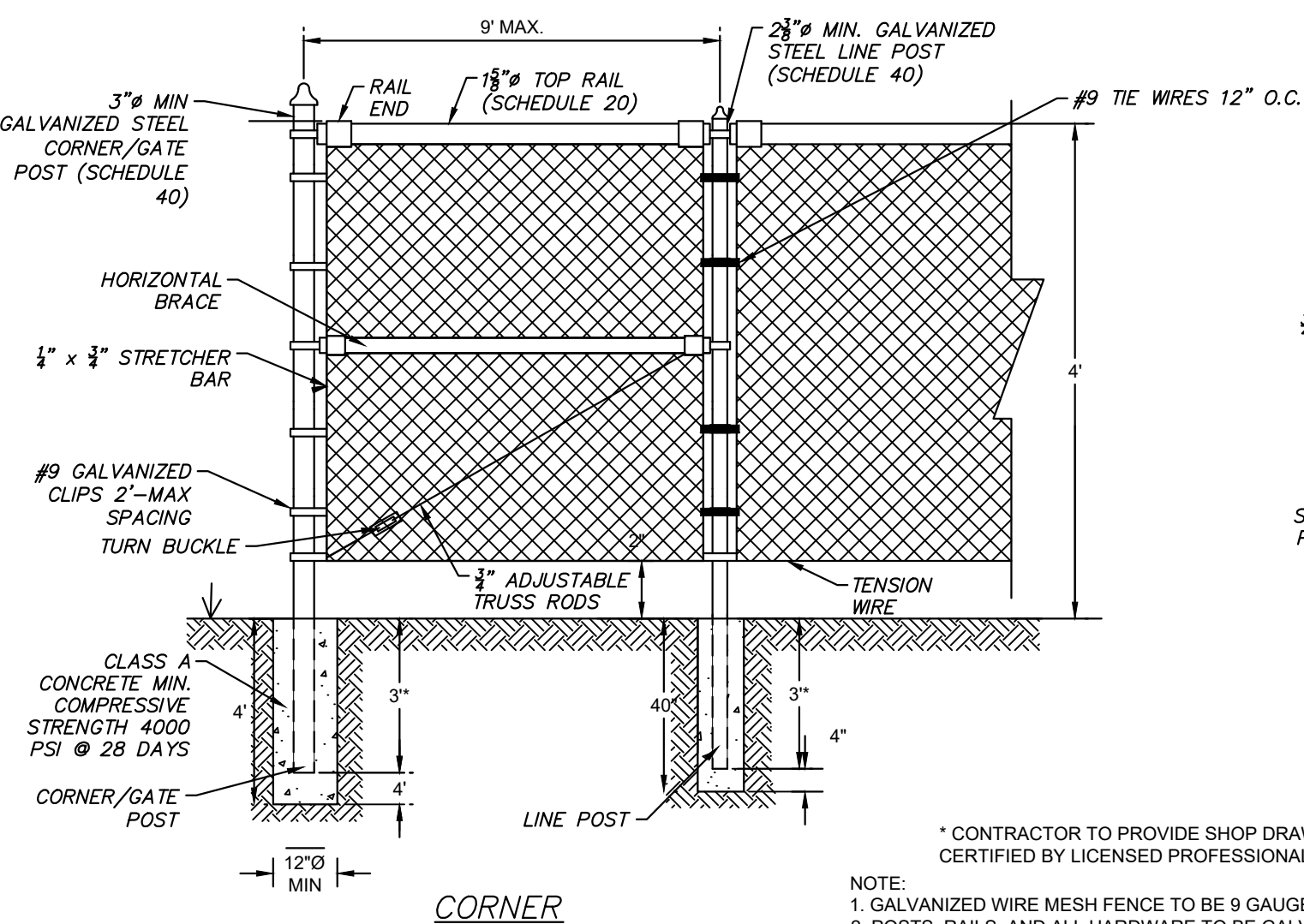
KEEP RIGHT (R4-7)



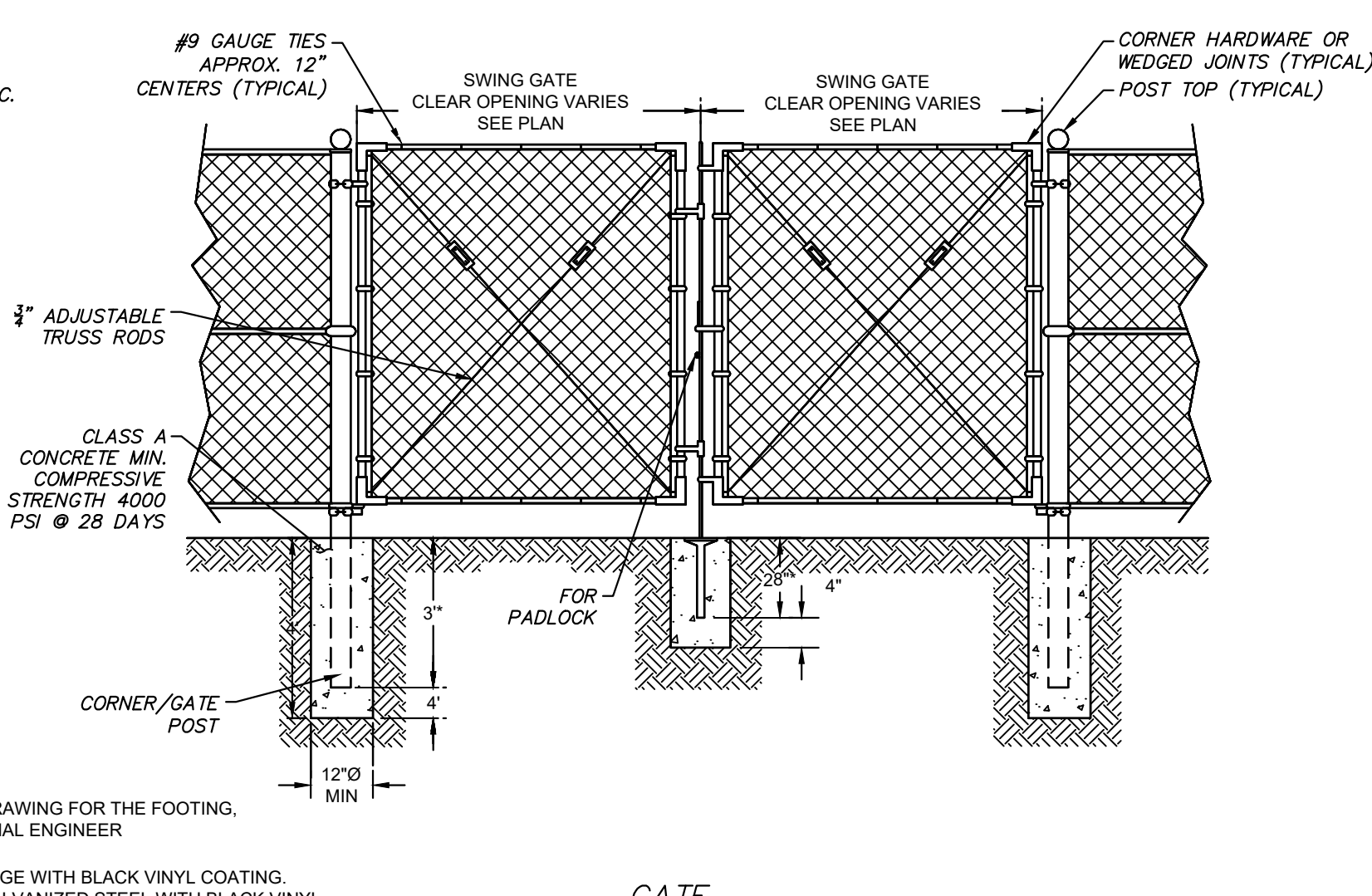
SITE BOLLARD



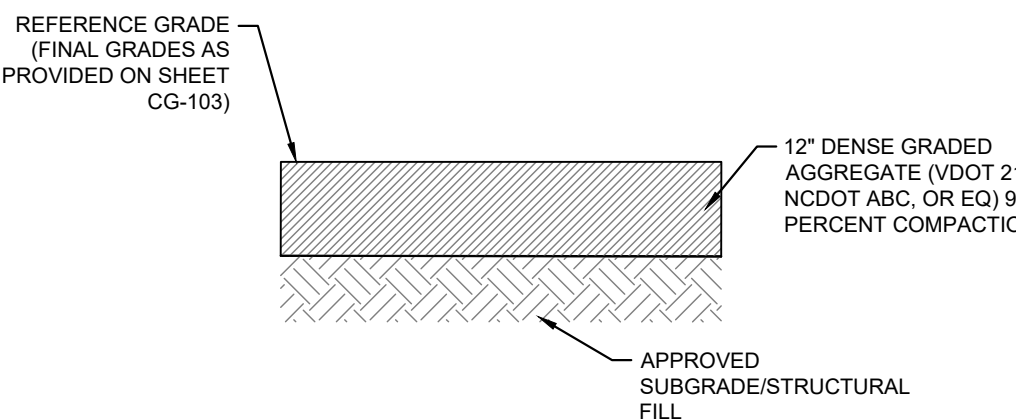
ADA PARKING SIGN POST



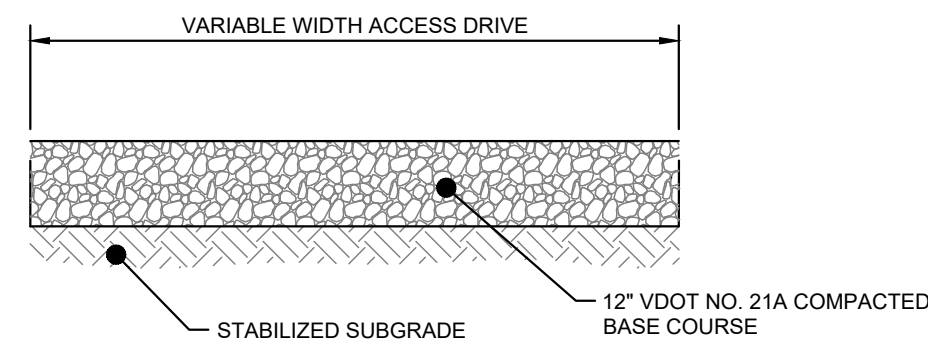
CHAIN LINK FENCE DETAIL (AROUND WET PONDS)



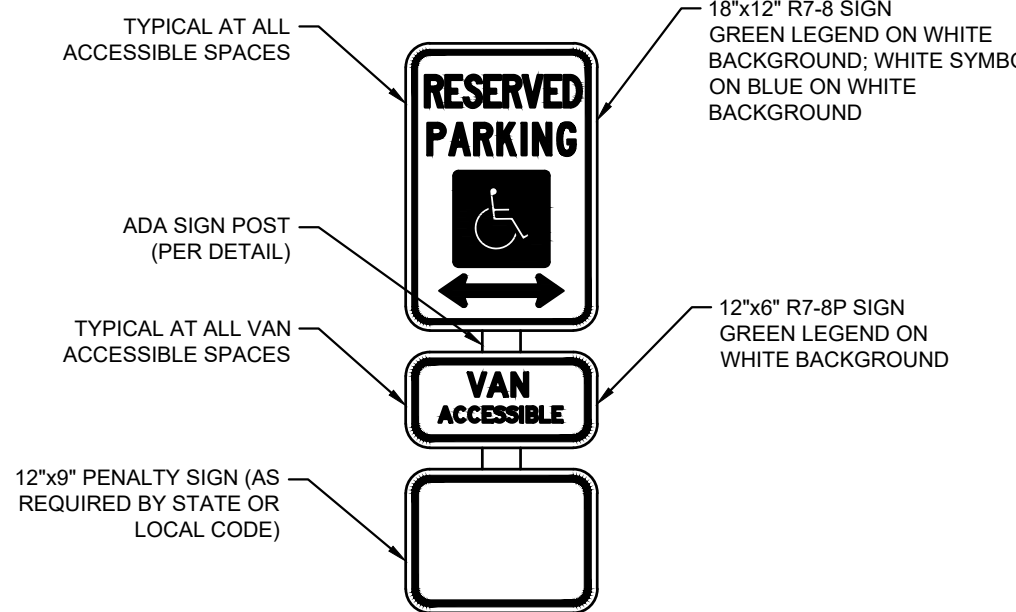
GATE



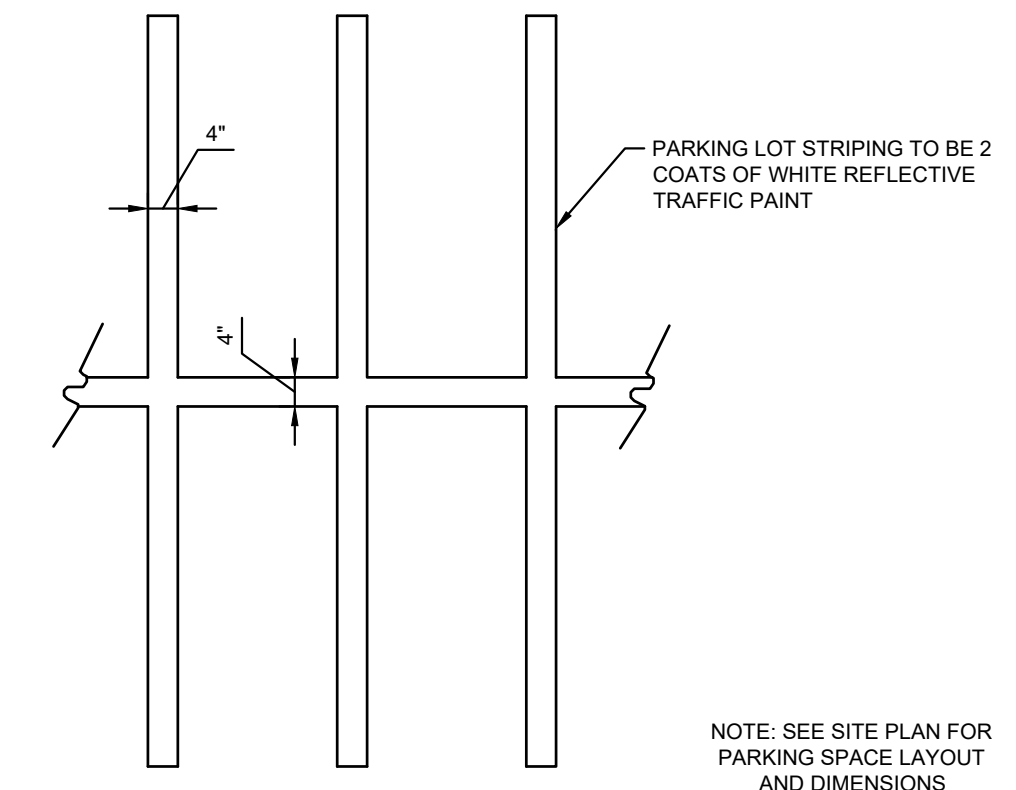
SUBSTATION PAD CROSS SECTION PROVIDED BY DEVELOPER



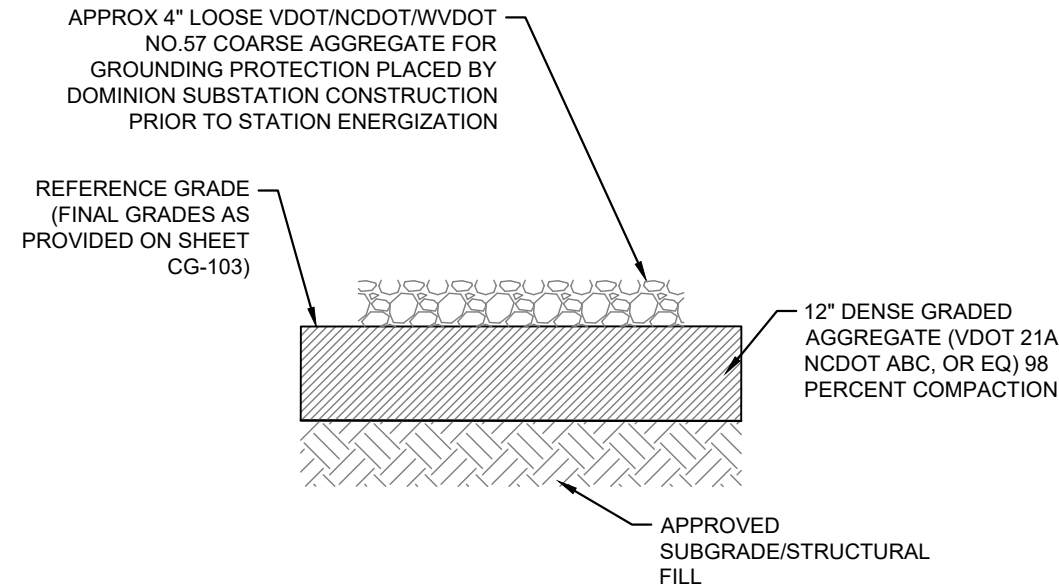
GRAVEL ACCESS ROAD



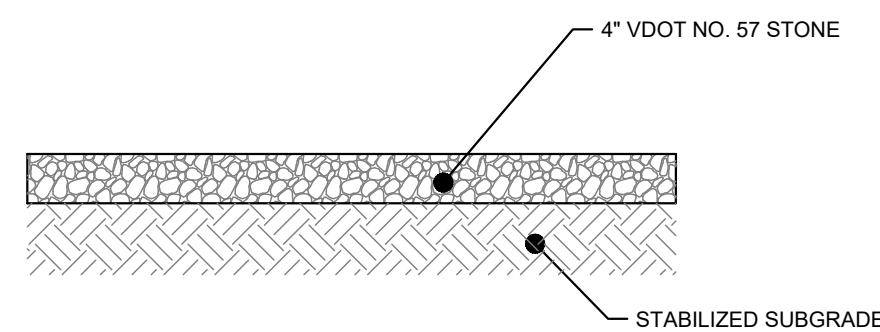
ADA PARKING SIGNAGE



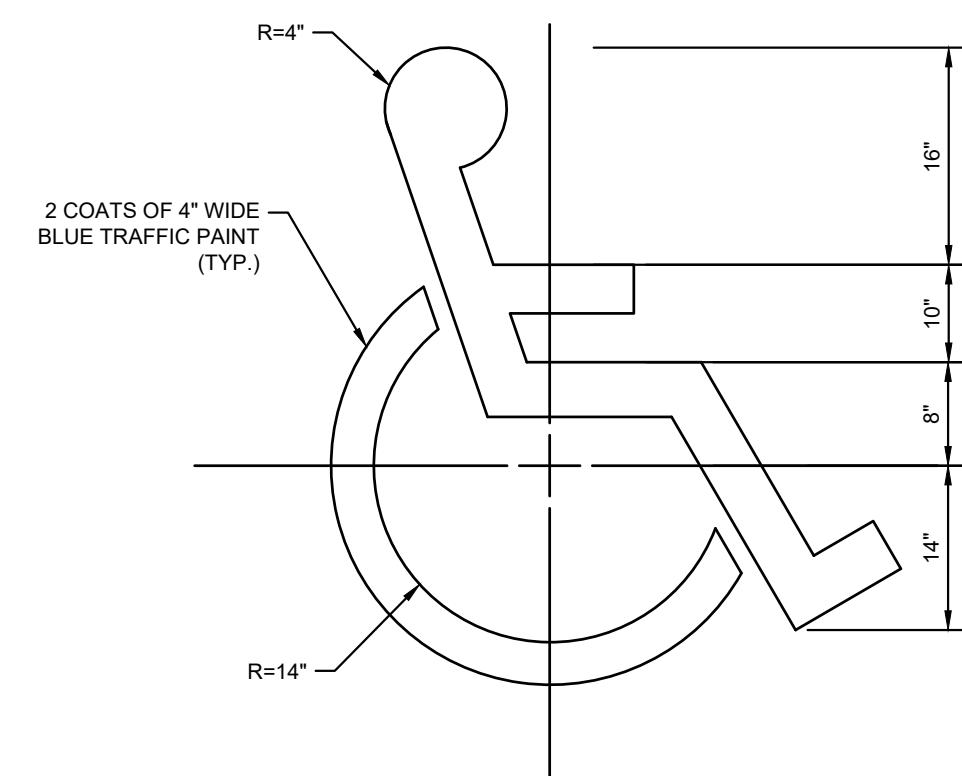
PARKING LOT STRIPING



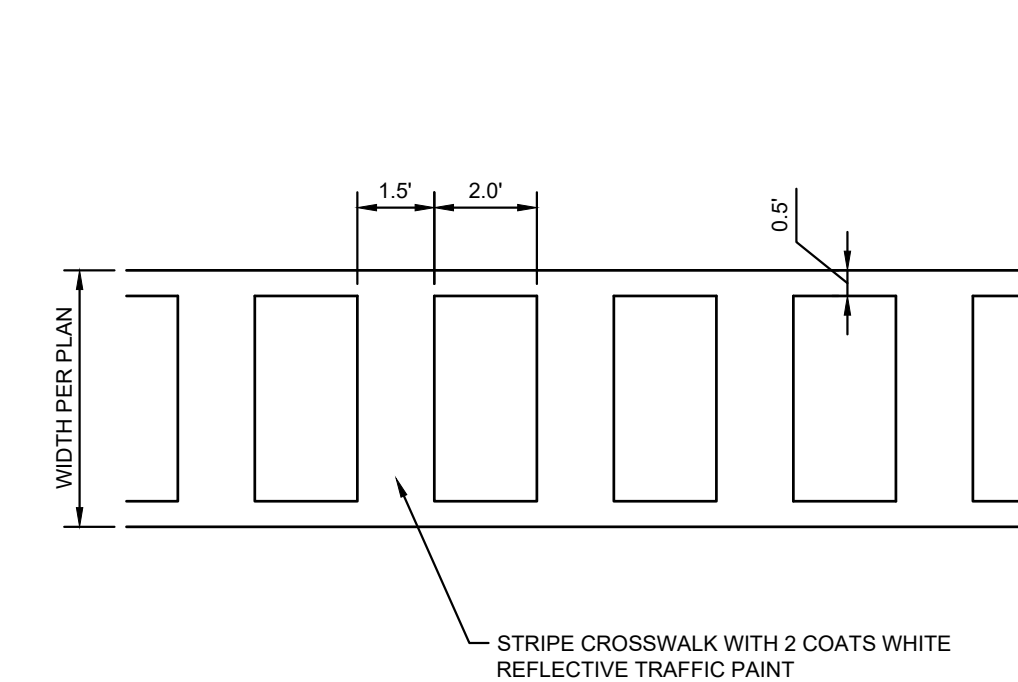
SUBSTATION PAD CROSS SECTION FINAL



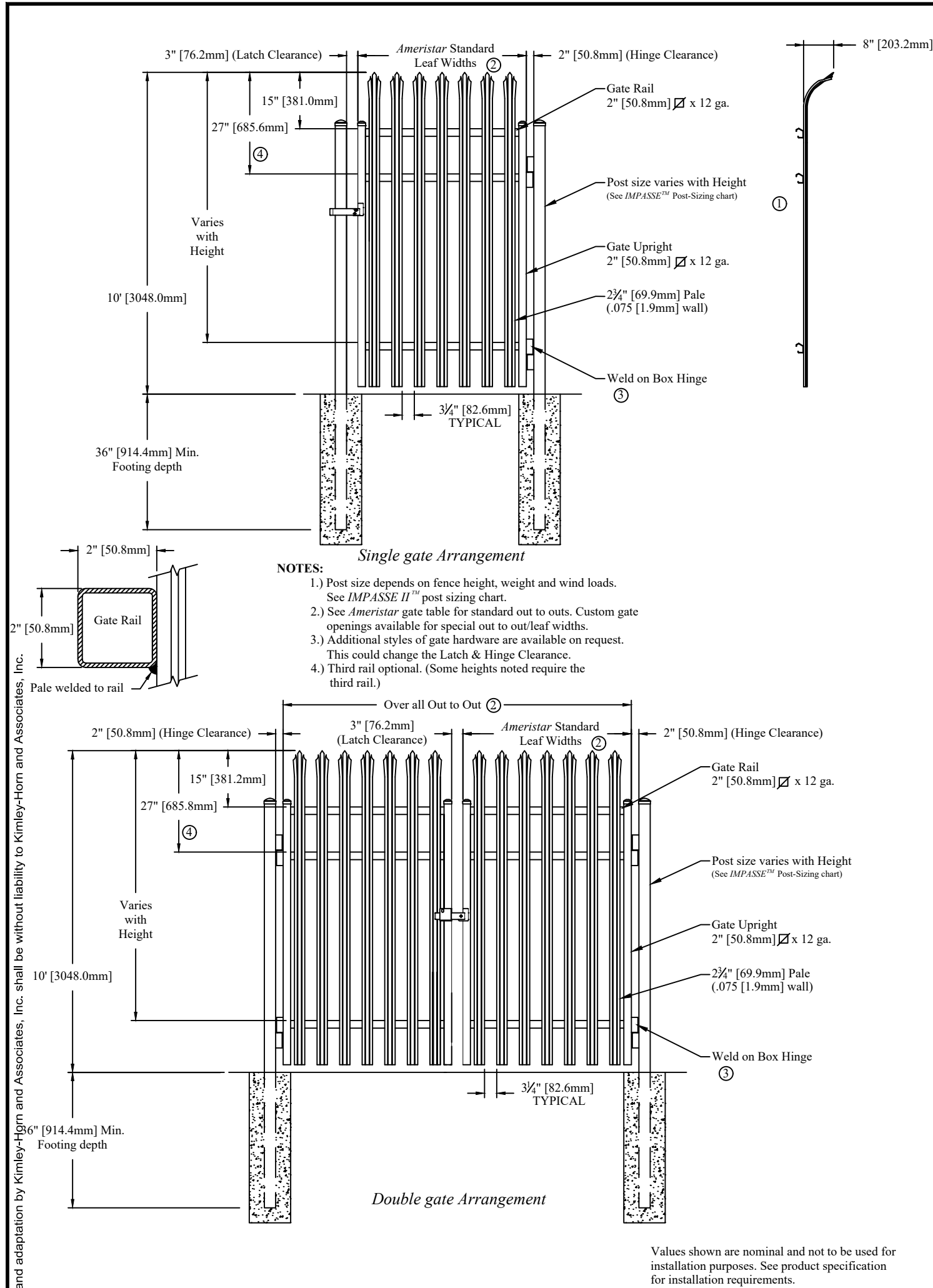
GRAVEL GENERATOR YARD



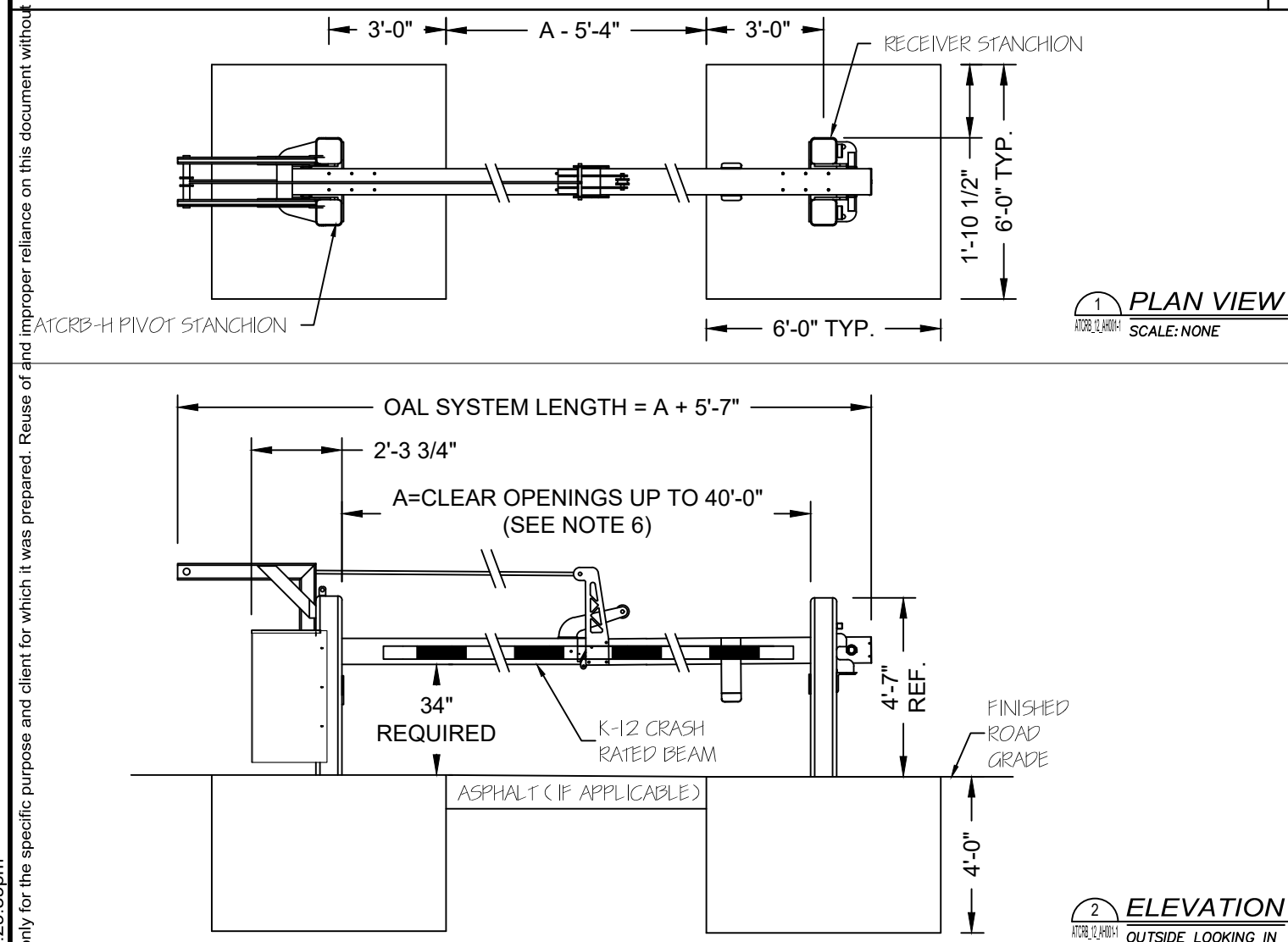
ADA PARKING SYMBOL



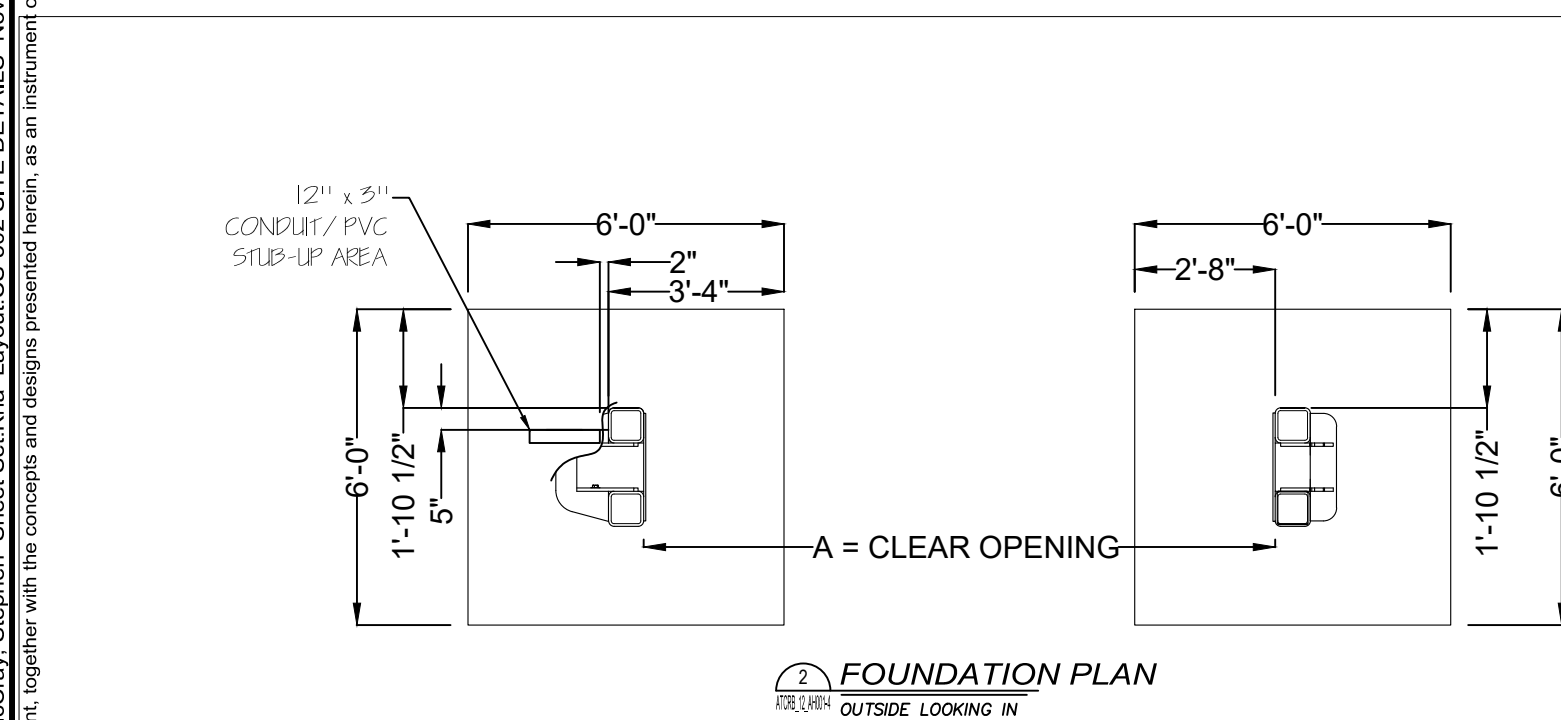
CROSSWALK STRIPING



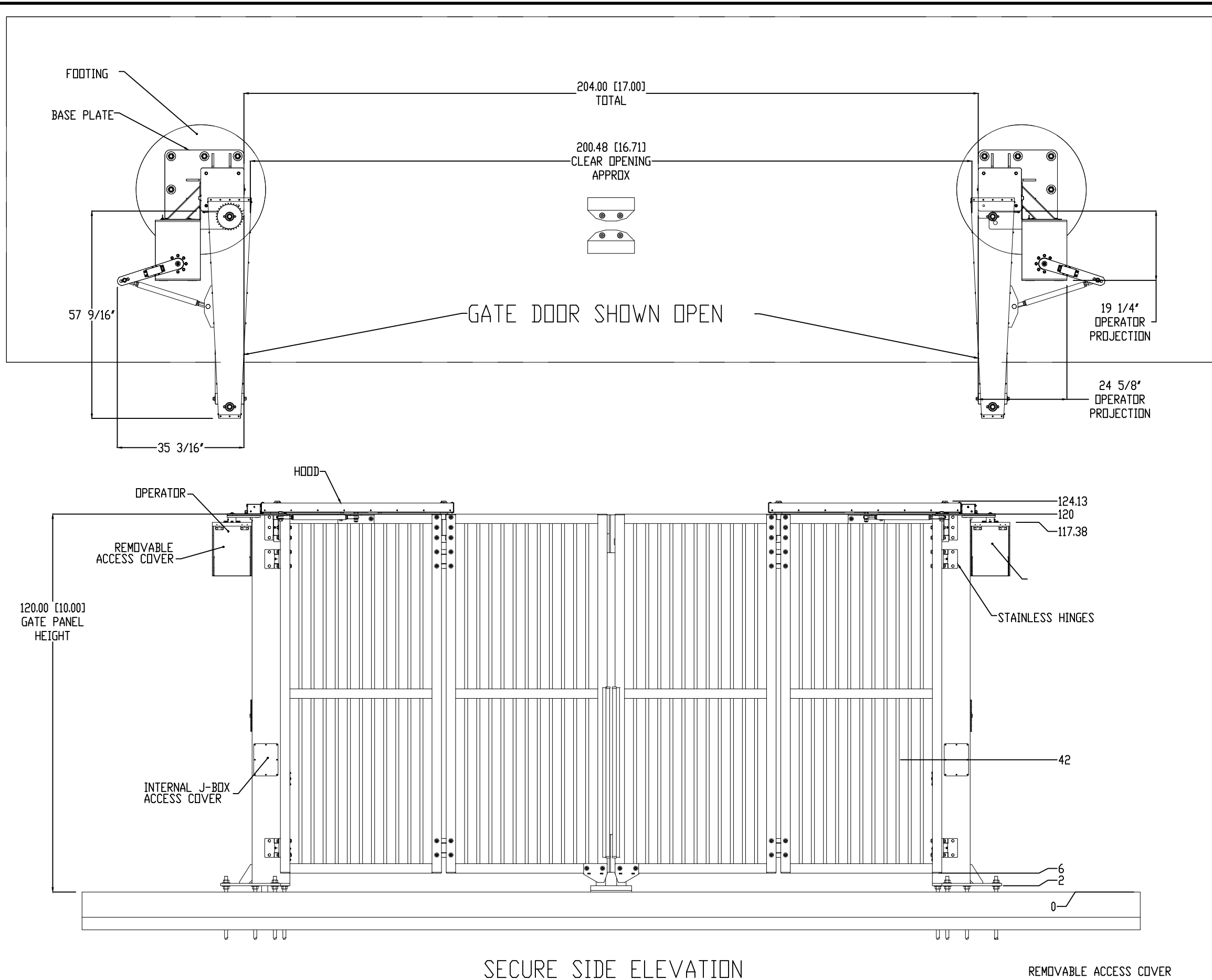
HIGH SECURITY STEEL PEDESTRIAN GATE DETAIL



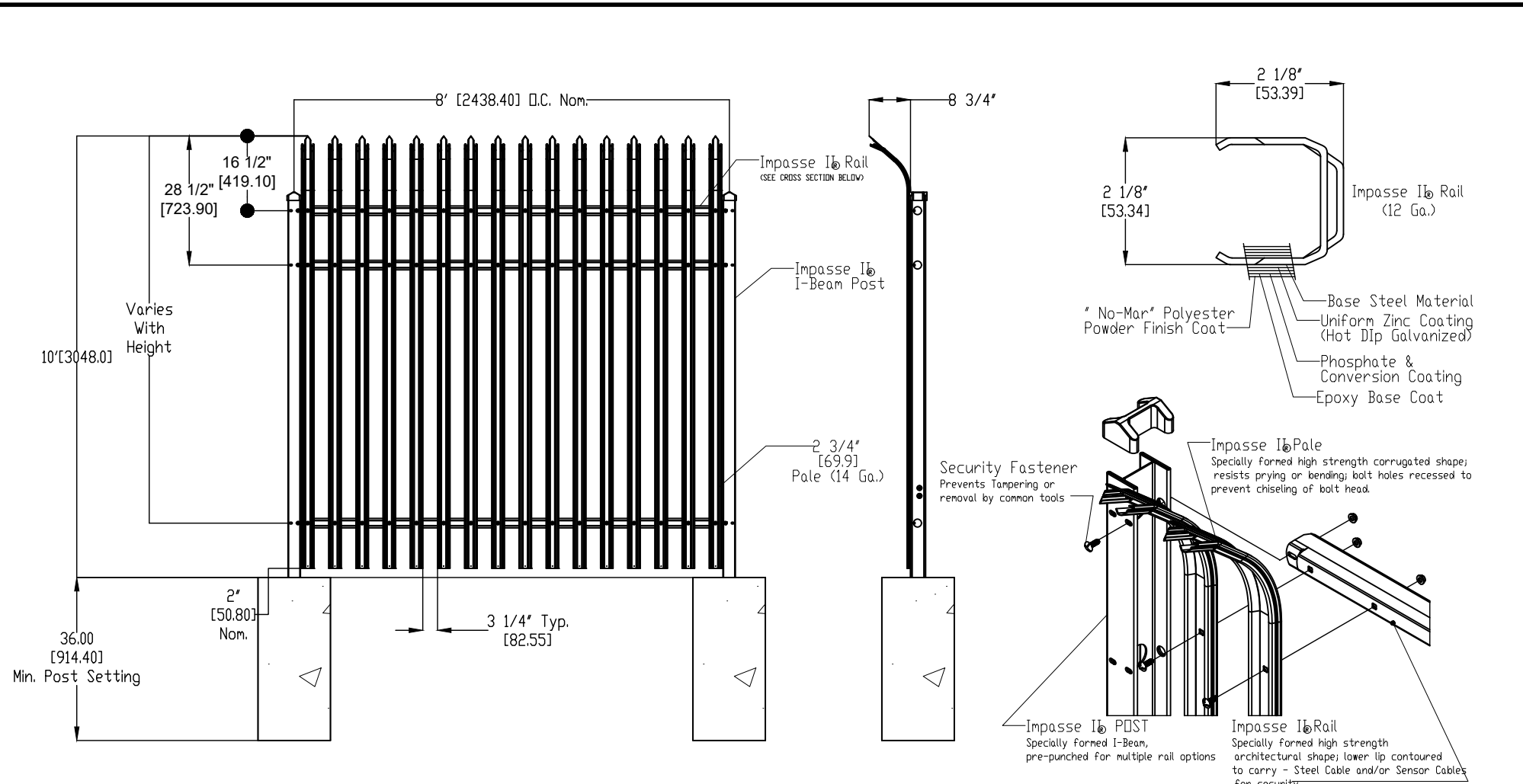
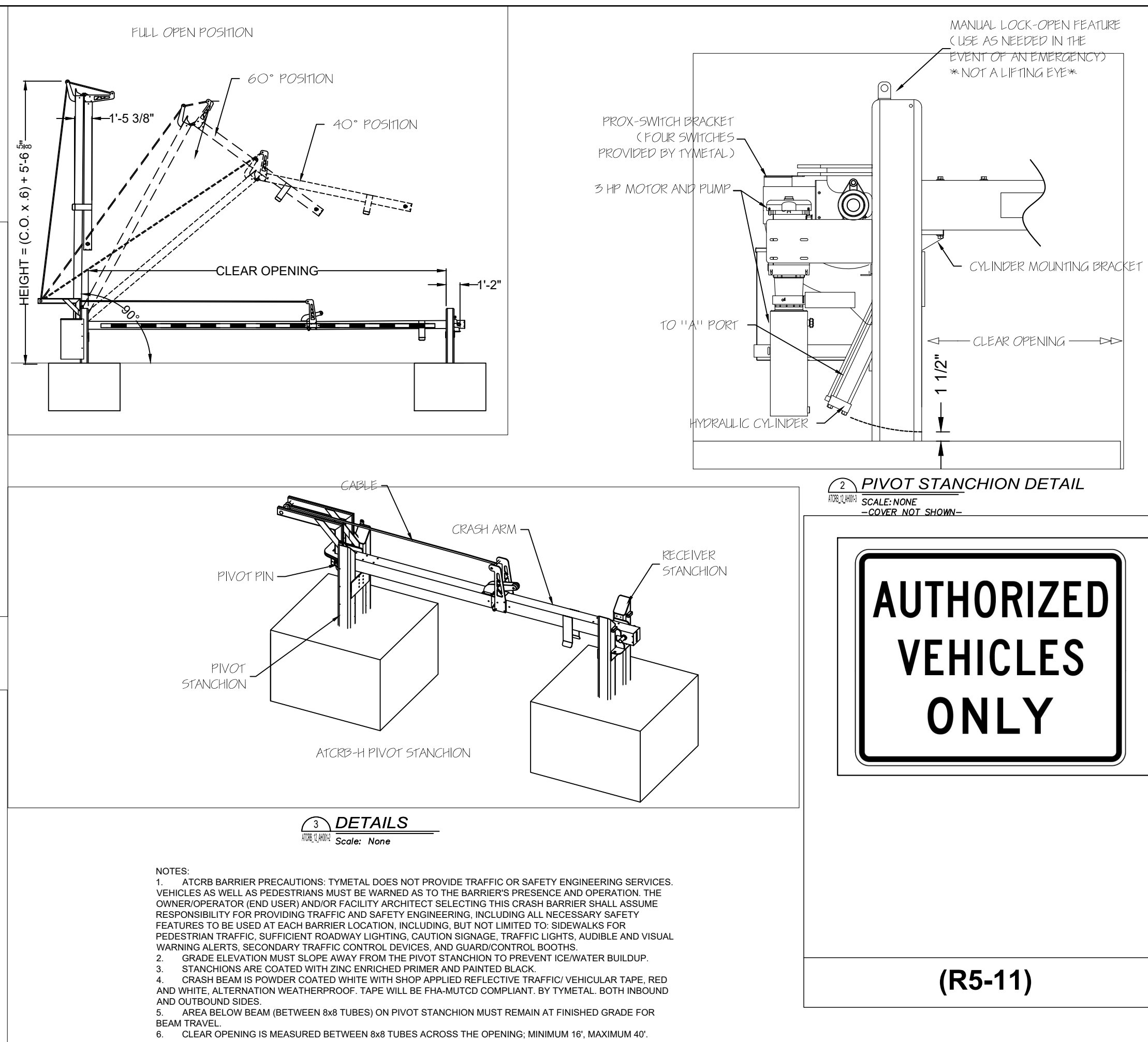
CRASH RATED ASTM F2656 M50-P2



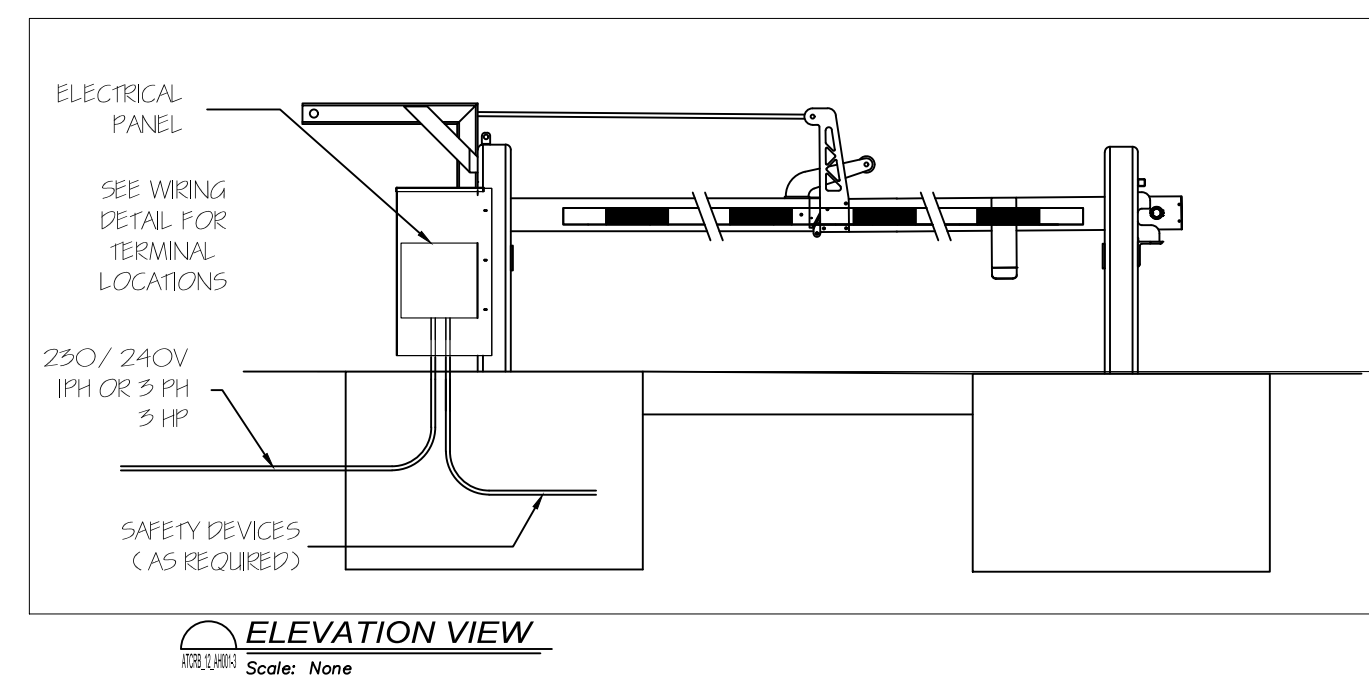
M-50 CRASH RATED BEAM ARM DETAIL



SECURFOLD TRACKLESS BIFOLD SPEED GATE

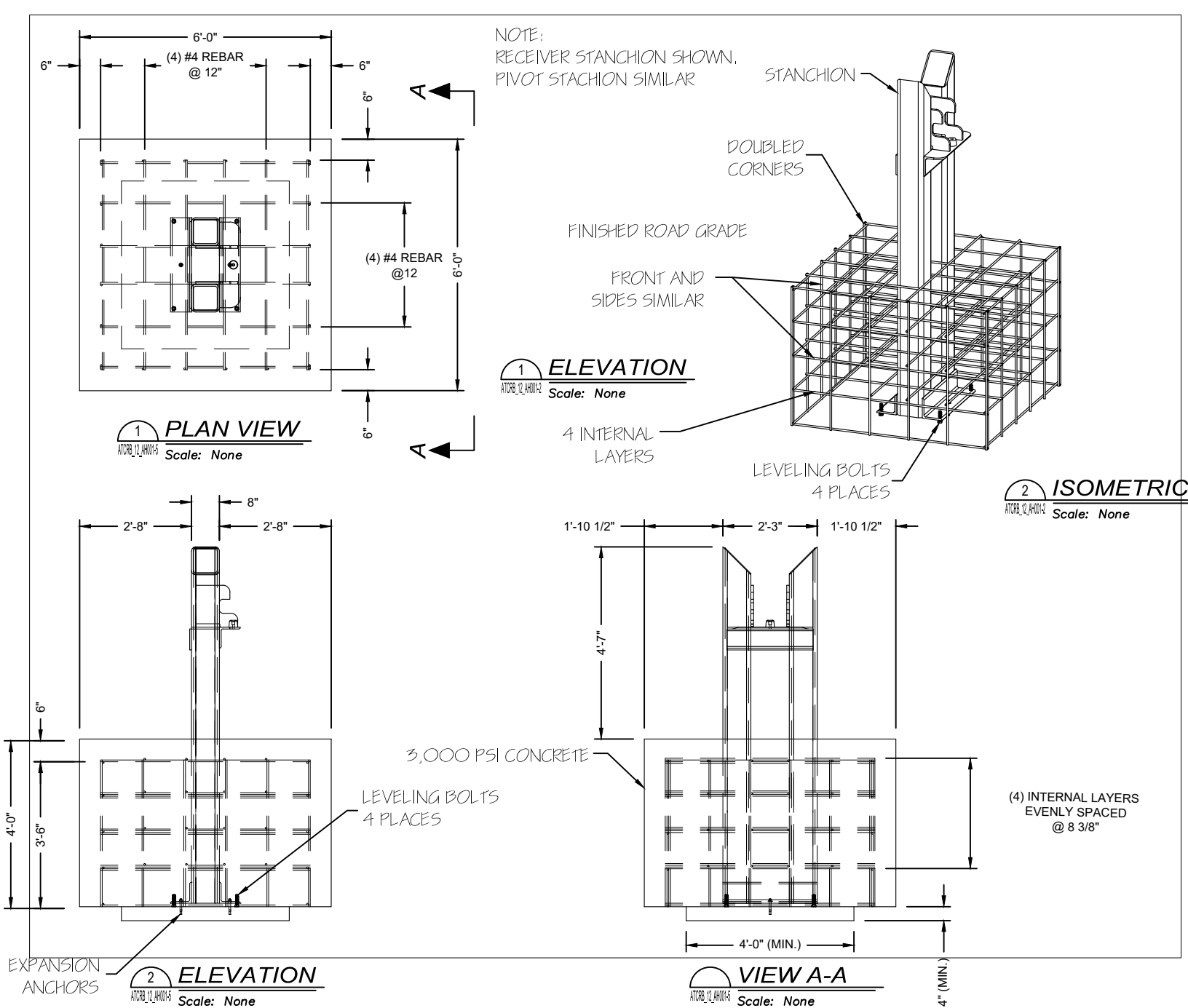


SECURITY FENCE DETAIL

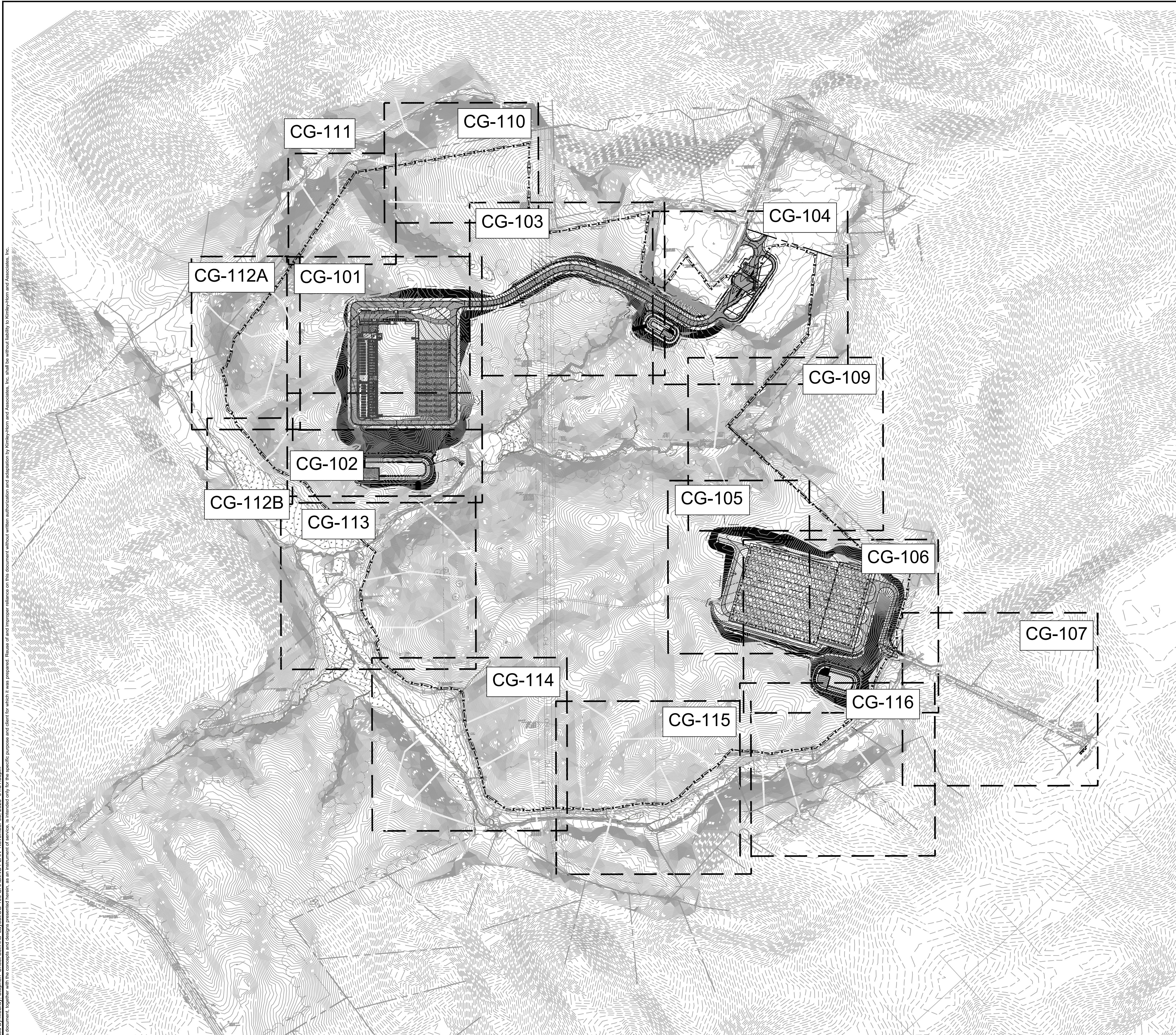


- NOTES:
1. ALL SAFETIES (BY OTHERS, AS APPLICABLE) TERMINATE IN EACH BARRIER CONTROLLER
 2. WIRE COUNTS ARE BASED ON HAVING SINGLE EPO BUTTON AND RESET TO ACTIVATE BARRIER
 3. SYSTEMS MAY OPERATE FROM ONE OR MORE CONTROL INTERFACES AS REQUIRED.
 4. BARRIER ARM CONTROLLER LOCATED WITHIN THE ELECTRICAL PANEL (BY SYMBOL)
 5. CONDUITS SHOWN ARE TYPICAL MINIMUMS. SEE LOCAL CODE FOR REQUIREMENTS.

CONDUIT & WIRE CHART				
CONDUIT	START LOCATION	END LOCATION	NO. OF WIRES	VOLTAGE/PHASE
A	CONTROL INTERFACE	BARRIER ARM CONTROLLER	6 MIN.	24VDC
B	ELECTRICAL PANEL BREAKER PANEL (IN GUARD HOUSE)	BARRIER ARM CONTROLLER	2	208-230/240 3ph
C	ELECTRICAL PANEL (IN UNIT)	SAFETY DEVICES	TBD	_____



- NOTES:
1. TYMTEL RECOMMENDS ALL SITE CONDITIONS BE REVIEWED BY A QUALIFIED ENGINEER. MINIMUM SITU SOIL BEARING CAPACITY OF 940 PSF AND BACKFILL COMPACTION TO A DENSITY OF NOT LESS THAN 95% MAXIMUM DRY DENSITY ARE REQUIRED. TYMTEL WILL NOT BE RESPONSIBLE FOR FAILED GATE OPERATIONS CAUSED BY UNSTABLE SOIL CONDITIONS.
 2. FOUNDATIONS SHOWN ARE BASED ON AVERAGE SOIL AND SITE CONDITIONS. FOUNDATIONS MUST BE IN ACCORDANCE WITH ALL LOCAL CODES, AND SHOULD BE REVIEWED BY A LOCAL ENGINEER.



GRADING LEGEND

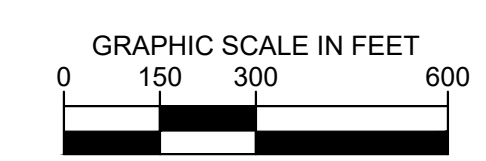
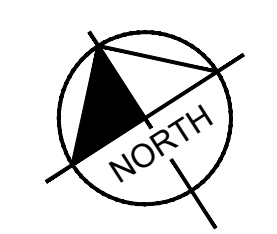
- | | |
|---|-------------------------------|
|  | STRUCTURE LABEL |
|  | STORMWATER CONVEYANCE CHANNEL |
| TC: | TOP OF CURB ELEVATION |
| BC: | BOTTOM OF CURB ELEVATION |
| FFE: | FINISHED FLOOR ELEVATION |
| FG: | FINISHED SURFACE ELEVATION |
| P: | PAVEMENT ELEVATION |
| G: | GROUND ELEVATION |
| TW: | TOP OF WALL ELEVATION |
| BW: | BOTTOM OF WALL ELEVATION |
| BD: | BOTTOM OF DITCH |
| HP: | HIGH POINT |
| (ME): | MATCH EXISTING |
| SW: | SIDEWALK |
| RIM: | RIM OF STORM STRUCTURE |
|  | SPILLING CURB AND GUTTER |

GRADING NOTES

1. THE ROOFLANDSCAPE DRAINAGE SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH THE CURRENT EDITION OF THE INTERNATIONAL PLUMBING CODE.
2. PIPE LENGTHS ARE MEASURED FROM CENTER OF CHAMBER TO CENTER OF CHAMBER.
3. VDOT STANDARD ST-1 STEPS ARE REQUIRED ON ALL STRUCTURES WITH HEIGHT GREATER THAN 4 FEET.
4. ADA ACCESSIBLE PARKING SPACES ARE SHOWN AND DESIGNED WITH A MAXIMUM 1.75% SLOPE IN ALL DIRECTIONS. CONTRACTOR TO ENSURE CROSS SLOPE DOES NOT EXCEED 2.0%.
5. PROPOSED SIDEWALK/ADA ACCESSIBLE ROUTES ARE SHOWN AS AND DESIGNED WITH A MAXIMUM 1.75% CROSS SLOPE AND A 7.5% LONGITUDINAL SLOPE. CONTRACTOR TO ENSURE CROSS SLOPE DOES NOT EXCEED 2.0% AND LONGITUDINAL SLOPE DOES NOT EXCEED 5.0%.
6. CONTRACTOR TO STAKE AND VERIFY FIELD ELEVATIONS AT POND OUTFALLS AND AREAS OF DISTURBANCE IN CLOSE PROXIMITY TO SEWAGE AND WETLANDS. CONTRACTOR TO NOTIFY ENGINEER OF RECORD OF ANY DISCREPANCIES FROM PLANS PRIOR TO INSTALLATION OF PROPOSED IMPROVEMENTS.
7. REFER TO THE GEOTECHNICAL REPORT FOR SITE SOILS INFORMATION AND EARTHWORK RECOMMENDATIONS OF WHICH SHALL BE CONSIDERED A PART OF THESE CONTRACT DOCUMENTS. SITE PREPAREMENT AND EARTHWORK OPERATIONS SHALL BE PER THE PROJECT SPECIFICATIONS, RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING REPORT AND/OR AS DIRECTED BY THE TESTING AGENCY UNLESS NOTED IN THE PLANS.
8. SEE SHEET CE-503 FOR STORMWATER CONVEYANCE CHANNEL CALCULATIONS. CONTRACTOR TO INSTALL CHANNEL LININGS AS NOTED IN THE "PHASE II ETS" AND POST DEVELOPMENT DITCH DESIGN SUMMARY TABLE ON SHEET CE-503.

TRANSCONTINENTAL GAS PIPELINE
RIGHT-OF-WAY WORK NOTES

1. ONSITE: A NON-AUTHORIZED WORKERS REPRESENTATIVE MUST BE ON SITE PRIOR TO AND DURING ANY SURFACE DISTURBING WORK WITHIN THE TRANSCONTINENTAL GAS PIPELINE RIGHT-OF-WAY. THE AUTHORIZED COMPANY WILL ASSIST IN DETERMINING THE LOCATION OF THE PIPELINE AND THE ROW WIDTH, AND THE EXISTING COVER OVER THE PIPELINE AND WILL REMAIN ON SITE TO MONITOR ALL ACTIVITIES WITHIN THE ROW.
2. VIBRATORY EQUIPMENT: VIBRATORY EQUIPMENT IS PROHIBITED WITHIN THE LIMITS OF THE COMPANY ROW. VIBRATORY EQUIPMENT IS NOT PERMITTED TO BE USED FOR ACHIEVING ALLOWED COMPACTION REQUIREMENTS.
3. EXCAVATION: NO MACHINE EXCAVATION APPLICABLE WITHIN 2 FEET OF ANY COMPANY PIPELINE. REMOVE SIDE CUTTERS FROM THE BUCKET, WELD OR ATTACH A BAR ACROSS THE TEETH.
4. CROSSING ANGLE: ROADS AND UTILITIES SHALL CROSS AS CLOSE TO 90° AS POSSIBLE.
5. NO HORIZONTAL OR VERTICAL BENDS ARE PERMITTED WITHIN COMPANY ROW.



Jacobs

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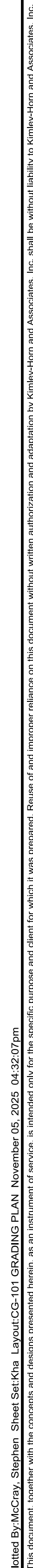


KHA PROJECT 113706001	DATE 11/14/2025	SCALE AS SHOWN	DESIGNED BY STM	DRAWN BY STM	CHECKED BY JMM
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OVERALL GRADING PLAN

PROJECT HERCULES

SHEET NUMBER
CG-100



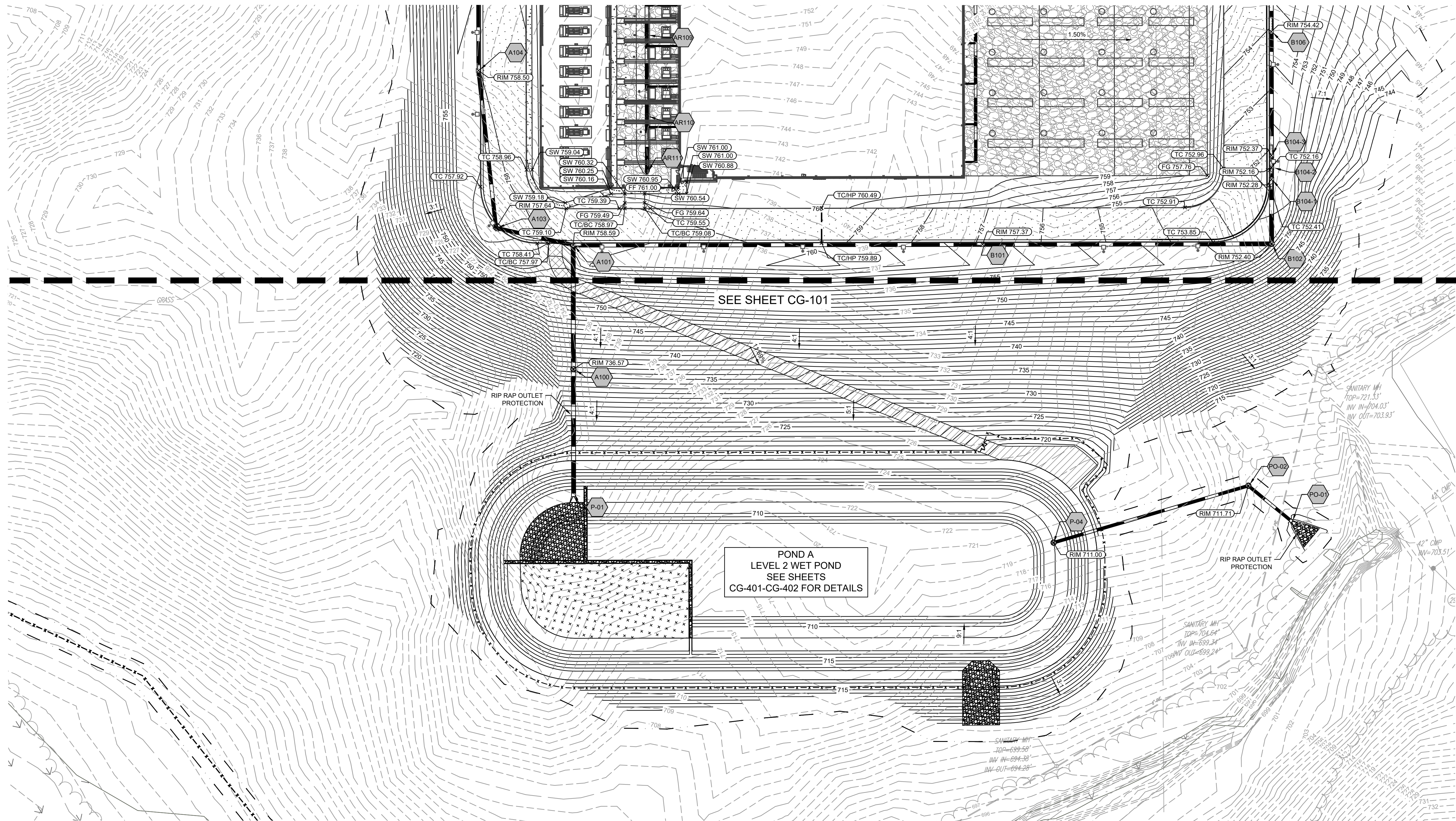
GRADING NOTES

- TRANSCONTINENTAL GAS PIPELINE
-
- RIGHT-OF-WAY WORK NOTES

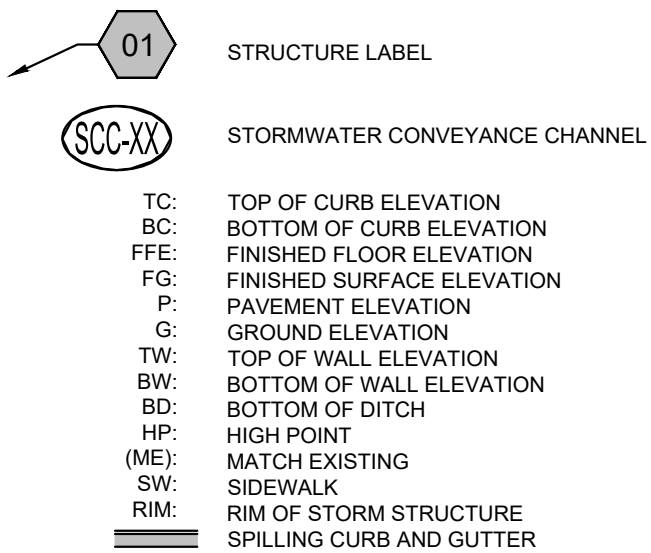
- GRAPHIC SCALE IN FEET
-
- A horizontal line with vertical tick marks at 0, 25, 50, and 100. The segment between 0 and 25 is white, 25 and 50 is black, 50 and 75 is white, and 75 and 100 is black.

SHEET NUMBER
CG-101

Plotted By:McCray, Stephen Sheet Set:Kha Layout:CG-102 GRADING PLAN November 05, 2025 04:32:37pm
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GRADING LEGEND

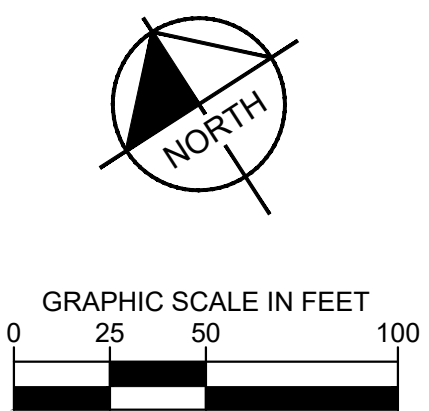


GRADING NOTES

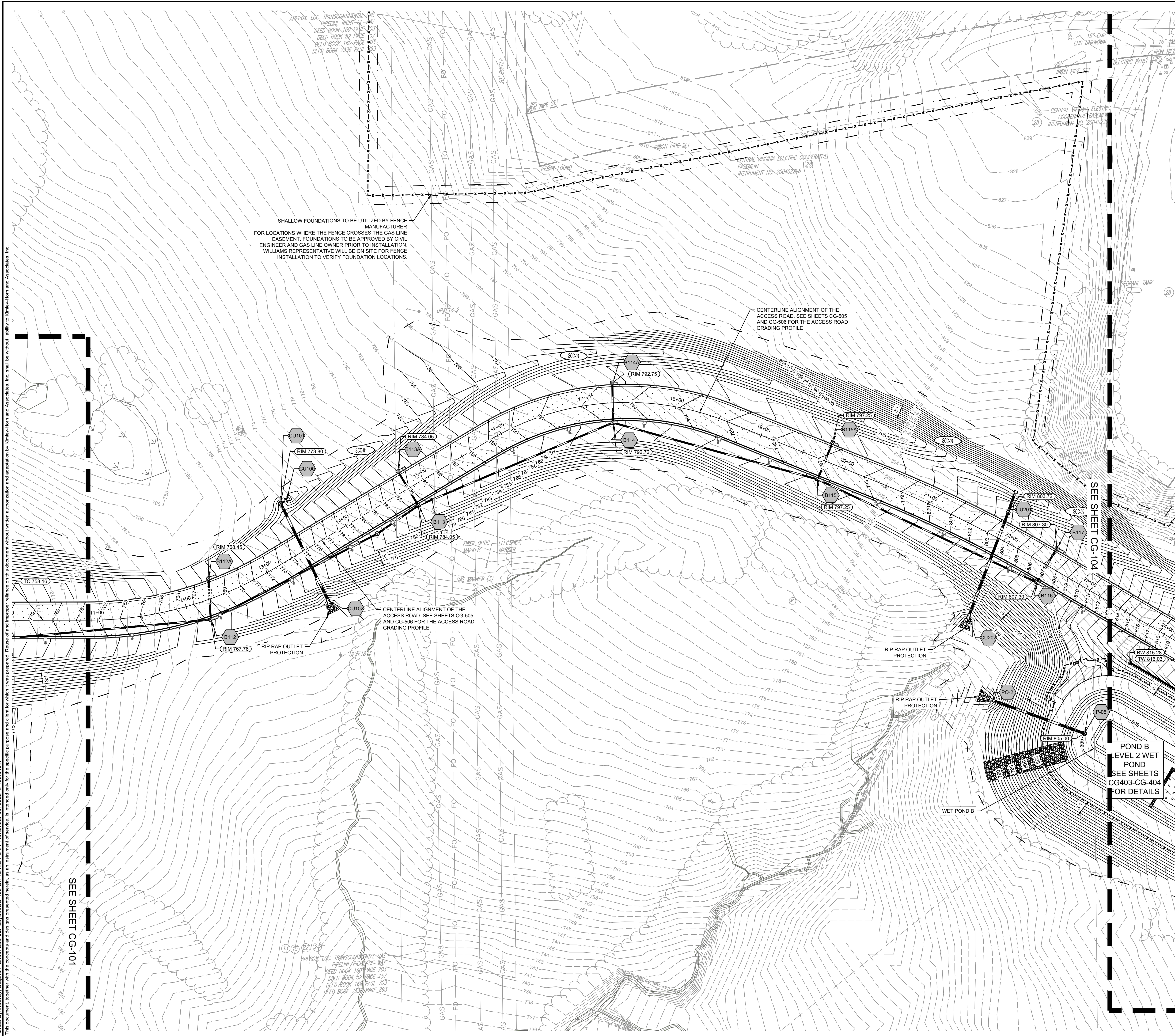
1. THE ROOF/LANDSCAPE DRAINAGE SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH THE CURRENT EDITION OF THE INTERNATIONAL PLUMBING CODE.
2. PIPE LENGTHS ARE MEASURED FROM CENTER OF CHAMBER TO CENTER OF CHAMBER.
3. VDOT STANDARD ST-1 STEPS ARE REQUIRED ON ALL STRUCTURES WITH HEIGHT GREATER THAN 4 FEET.
4. ADA ACCESSIBLE PARKING SPACES ARE SHOWN AND DESIGNED WITH A MAXIMUM 1.75% SLOPE IN ALL DIRECTIONS. CONTRACTOR TO ENSURE CROSS SLOPE DOES NOT EXCEED 2.0%.
5. PROPOSED SIDEWALK/ADA ACCESSIBLE ROUTES ARE SHOWN AS AND DESIGNED WITH A MAXIMUM 1.75% CROSS SLOPE AND A 4.0% LONGITUDINAL SLOPE. CONTRACTOR TO ENSURE CROSS SLOPE DOES NOT EXCEED 2.0% AND LONGITUDINAL SLOPE DOES NOT EXCEED 5.0%.
6. CONTRACTOR TO STAKE AND VERIFY FIELD ELEVATIONS AT POND OUTFALLS AND AREAS OF DISTURBANCE IN CLOSE PROXIMITY TO STREAMS AND WETLANDS. CONTRACTOR TO NOTIFY ENGINEER OF ANY FIELD DISCREPANCIES FROM PLANS PRIOR TO INSTALLATION OF PROPOSED IMPROVEMENTS.
7. REFER TO THE GEOTECHNICAL REPORT FOR SITE SOILS INFORMATION AND EARTHWORK RECOMMENDATIONS OF WHICH SHALL BE CONSIDERED A PART OF THESE CONTRACT DOCUMENTS. SITE PREPARATION AND EARTHWORK OPERATIONS SHALL BE PER THE PROPOSED RECOMMENDATIONS. RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING REPORT AND/OR AS DIRECTED BY THE TESTING AGENCY UNLESS NOTED IN THE PLANS.
8. SEE SHEET CE-503 FOR STORMWATER CONVEYANCE CHANNEL CALCULATIONS. CONTRACTOR TO INSTALL CHANNEL LININGS AS NOTED IN CHANNEL EROSION AND POST DEVELOPMENT ditch DESIGN SUMMARY TABLE." ON SHEET CE-503.

TRANSCONTINENTAL GAS PIPELINE RIGHT-OF-WAY WORK NOTES

1. **ONSITE: AN AUTHORIZED WILLIAMS REPRESENTATIVE MUST BE ON SITE PRIOR TO AND DURING ANY SURFACE DISTURBING WORK WITHIN THE TRANSCONTINENTAL GAS PIPELINE RIGHT-OF-WAY. THE AUTHORIZED COMPANY WHO ASSIST IN DETERMINING THE LOCATION OF THE PIPELINES, THE ROW WIDTH, AND THE EXISTING COVER OVER THE PIPELINE AND WILL REMAIN ON SITE TO MONITOR ALL ACTIVITIES WITHIN THE ROW.**
2. **VIBRATORY EQUIPMENT: VIBRATORY EQUIPMENT IS PROHIBITED WITHIN THE LIMITS OF THE COMPANY ROW. VIBRATORY EQUIPMENT IS NOT PERMITTED TO BE USED FOR ACHIEVING APPLICABLE COMPACTION REQUIREMENTS.**
3. **EXCAVATION: NO MACHINE EXCAVATION ALLOWED WITHIN 2 FEET OF ANY COMPANY PIPELINE. REMOVE SIDE CUTTERS FROM THE BUCKET, WELD OR ATTACH A BAR ACROSS THE TEETH.**
4. **CROSSING ANGLE: ROADS AND UTILITIES SHALL CROSS AS CLOSE TO 90° AS POSSIBLE.**
5. **NO HORIZONTAL OR VERTICAL BENDS ARE PERMITTED WITHIN COMPANY ROW.**



SHEET NUMBER CG-102		PROJECT HERCULES APPOMATTOX COUNTY VA		GRADING PLAN		<table border="1"> <tr> <td>KHA PROJECT 113706001</td> <td>DATE 11/14/2025</td> </tr> <tr> <td>SCALE AS SHOWN</td> <td>DESIGNED BY STM</td> </tr> <tr> <td>DRAWN BY STM</td> <td>CHECKED BY JMM</td> </tr> </table>	KHA PROJECT 113706001	DATE 11/14/2025	SCALE AS SHOWN	DESIGNED BY STM	DRAWN BY STM	CHECKED BY JMM		© 2025 KIMLEY-HORN AND ASSOCIATES, INC. 6806 PARAGON PLACE, SUITE 310, RICHMOND, VA 23230 PHONE: 804-673-3882 WWW.KIMLEY-HORN.COM	
KHA PROJECT 113706001	DATE 11/14/2025														
SCALE AS SHOWN	DESIGNED BY STM														
DRAWN BY STM	CHECKED BY JMM														



GRADING LEGEND

STRUCTURE LABEL

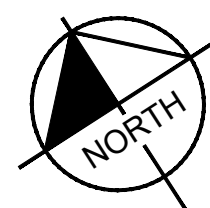
(SCC-XX)

STORMWATER CONVEYANCE CHANNEL

TC:	TOP OF CURB ELEVATION
BC:	BOTTOM OF CURB ELEVATION
FFE:	FINISHED FLOOR ELEVATION
FG:	FINISHED SURFACE ELEVATION
P:	PAVEMENT ELEVATION
G:	GROUND ELEVATION
TW:	TOP OF WALL ELEVATION
BW:	BOTTOM OF WALL ELEVATION
BD:	BOTTOM OF DITCH
HP:	HIGH POINT
(ME):	MATCH EXISTING
SW:	SIDEWALK
RIM:	RIM OF STORM STRUCTURE
==	SPILLING CURB AND GUTTER

GRADING NOTES

**TRANSCONTINENTAL GAS PIPELINE
RIGHT-OF-WAY WORK NOTES**



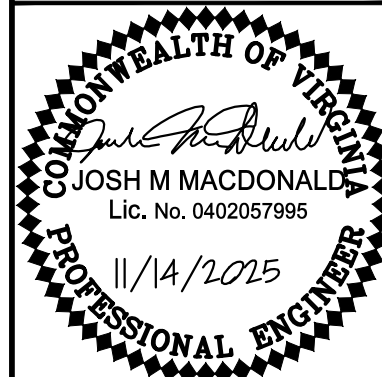
GRAPHIC SCALE IN FEET

Jacobs

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KHA PROJECT
113706001

DATE

SCALE AS SHOWN

DRAWN BY S-

CHECKED BY JN

GRADING PLAN

PROJECT HERCULES

VA

APPOMATTOX COUNTY

SHEET NUMBER
CG-103

Plotted By: McCray, Stephen Sheet Set: Kha Layout: CG-105 GRADING PLAN November 05, 2025 04:34:00pm

A gray hexagon with the number '01' inside, connected to a line extending from the left.

STRUCTURE LABEL

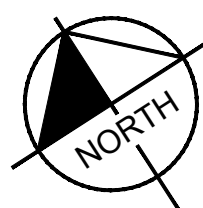
(SCC-XX)

STORMWATER CONVEYANCE CHANNEL

TC:	TOP OF CURB ELEVATION
BC:	BOTTOM OF CURB ELEVATION
FFE:	FINISHED FLOOR ELEVATION
FG:	FINISHED SURFACE ELEVATION
P:	PAVEMENT ELEVATION
G:	GROUND ELEVATION
TW:	TOP OF WALL ELEVATION
BW:	BOTTOM OF WALL ELEVATION
BD:	BOTTOM OF DITCH
HP:	HIGH POINT
(ME):	MATCH EXISTING
SW:	SIDEWALK
RIM:	RIM OF STORM STRUCTURE
	SPILLING CURB AND GUTTER

1. THE ROOF/LANDSCAPE DRAINAGE SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH THE CURRENT EDITION OF THE INTERNATIONAL PLUMBING CODE.
2. PIPE LENGTHS ARE MEASURED FROM CENTER OF CHAMBER TO CENTER OF CHAMBER.
3. VOOT STANDARD ST-1 STEPS ARE REQUIRED ON ALL STRUCTURES WITH HEIGHT GREATER THAN 4 FEET.
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8. SEE SHEET C503-30 FOR STORMWATER CONVEYANCE CHANNEL CALCULATIONS. CONTRACTOR TO INSTALL CHANNEL LININGS AS NOTED IN PHASE I/II EROSION AND POST DEVELOPMENT DESIGN SUMMARY TABLE "C" SHEET C503-30.

1. **ONSITE: AN AUTHORIZED WILLIAMS REPRESENTATIVE MUST BE ON SITE PRIOR TO AND DURING ANY SURFACE DISTURBING WORK WITHIN THE TRANSCONTINENTAL GAS PIPELINE RIGHT-OF-WAY. THE AUTHORIZED COMPANY WILL ASSIST IN DETERMINING THE LOCATION OF THE PIPELINES, THE ROW WIDTH, AND THE EXISTING COVER OVER THE PIPELINE AND WILL REMAIN ON SITE TO MONITOR ALL ACTIVITIES WITHIN THE ROW.**
2. **VIBRATORY EQUIPMENT: VIBRATORY EQUIPMENT IS PROHIBITED WITHIN THE LIMITS OF THE COMPANY ROW. VIBRATORY EQUIPMENT IS NOT PERMITTED TO BE USED FOR ACHIEVING APPLICABLE COMPACTATION REQUIREMENTS.**
3. **EXCAVATION: NO MACHINE EXCAVATION ALLOWED WITHIN 2 FEET OF ANY COMPANY PIPELINE. REMOVE SIDE CUTTERS FROM THE BUCKET, WELD OR ATTACH A BAR ACROSS THE TEETH.**
4. **CROSSING ANGLE: ROADS AND UTILITIES SHALL CROSS AS CLOSE TO 90° AS POSSIBLE.**
5. **NO HORIZONTAL OR VERTICAL BENDS ARE PERMITTED WITHIN COMPANY ROW.**



GRAPHIC SCALE IN FEET

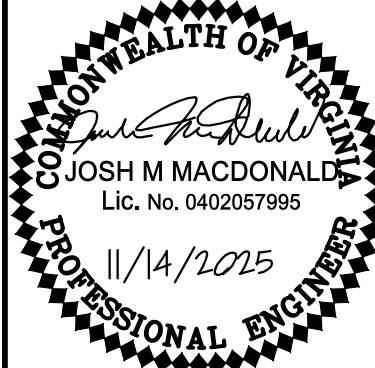


0 25 50 100

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KHA PROJECT
113706001

DATE	11/11/2025
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SCALE	AS SHOWN
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DRAWN BY S-

CHECKED BY JN

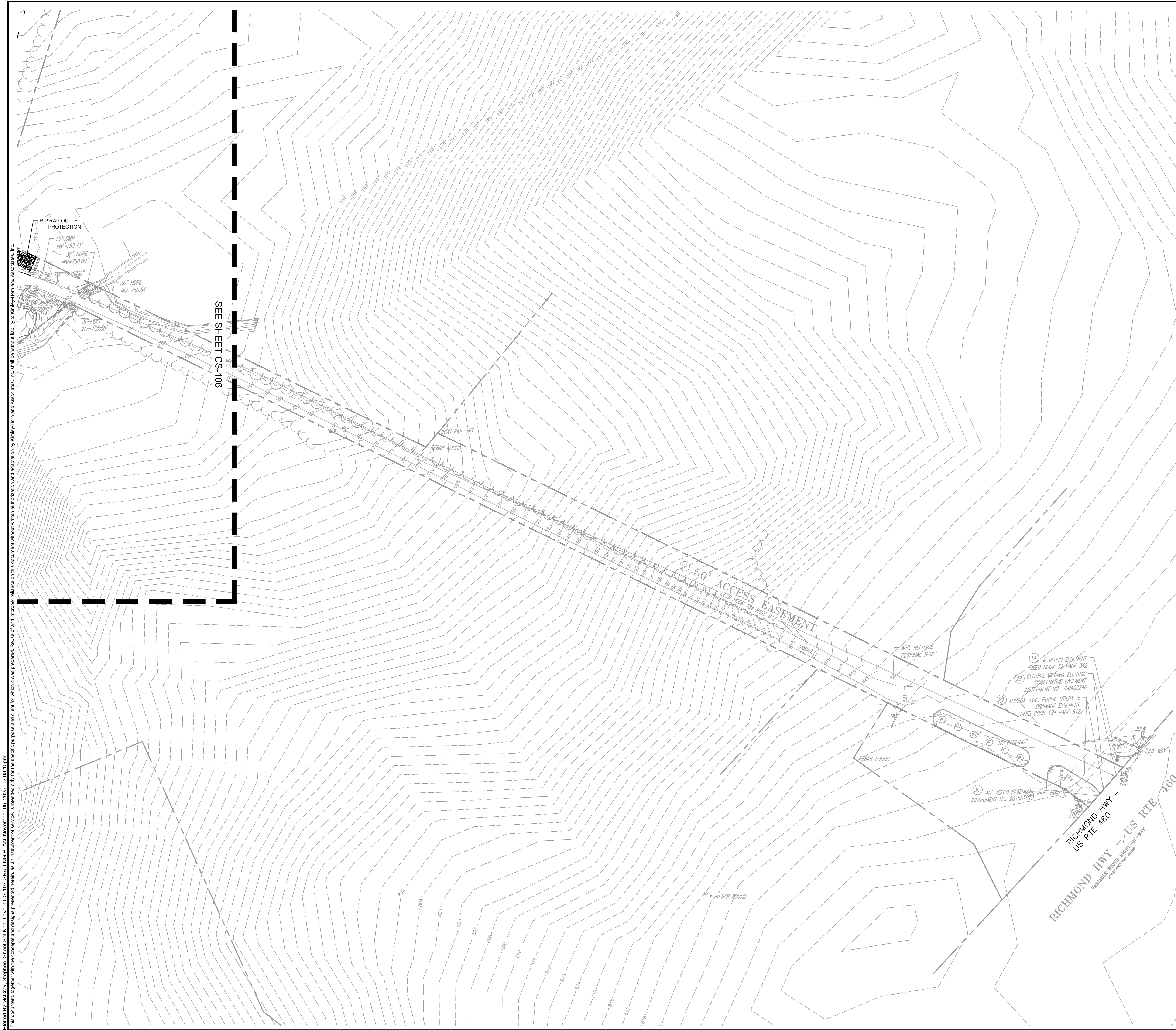
GRADING PLAN

PROJECT HERCULES

A

APBOMATTOX COUNTY

SHEET NUMBER
CG-105



GRADING LEGEND

- 01

STRUCTURE LABEL
- SCC-W

STORMWATER CONVEYANCE CHANNEL
- TC:

TOP OF CURB ELEVATION
- BC:

BOTTOM OF CURB ELEVATION
- FPE:

FINISHED FLOOR ELEVATION
- FG:

FINISHED SURFACE ELEVATION
- P:

PAVEMENT ELEVATION
- G:

GROUND ELEVATION
- TW:

TOP OF WALL ELEVATION
- BW:

BOTTOM OF WALL ELEVATION
- BD:

BOTTOM OF DITCH
- HP:

HIGH POINT
- (ME):

MATCH EXISTING
- SW:

SIDEWALK
- RIM:

RIM OF STORM STRUCTURE
- SPILLING CURB AND GUTTER

GRADING NOTES

1. THE ROOFLANDSCAPE DRAINAGE SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH THE CURRENT EDITION OF THE INTERNATIONAL PLUMBING CODE.
2. PIPE LENGTHS ARE MEASURED FROM CENTER OF CHAMBER TO CENTER OF CHAMBER.
3. VDOT STANDARD ST-1 STEPS ARE REQUIRED ON ALL STRUCTURES WITH HEIGHT GREATER THAN 4 FEET.
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5. PROPOSED SIDEWALK/ADA ACCESSIBLE ROUTES ARE SHOWN AS AND DESIGNED WITH A MAXIMUM 1.75% CROSS SLOPE AND A 4.75% LONGITUDINAL SLOPE. CONTRACTOR TO ENSURE CROSS SLOPE DOES NOT EXCEED 2.0% AND LONGITUDINAL SLOPE DOES NOT EXCEED 5.0%.
6. CONTRACTOR TO STAKE AND VERIFY FIELD ELEVATIONS AT POND OUTFALLS AND AREAS OF DISTURBANCE IN CLOSE PROXIMITY TO STREAMS AND WETLANDS. CONTRACTOR TO NOTIFY ENGINEER OF RECORD OF ANY DISCREPANCIES FROM PLANS PRIOR TO INSTALLATION OF PROPOSED IMPROVEMENTS.
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8. SEE SHEET CE-503 FOR STORMWATER CONVEYANCE CHANNEL CALCULATIONS. CONTRACTOR TO INSTALL CHANNEL LININGS AS NOTED IN THE "PHASE II ETS AND POST DEVELOPMENT DITCH DESIGN SUMMARY TABLE" ON SHEET CE-503.

TRANSCONTINENTAL GAS PIPELINE
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COMMONWEALTH OF VIRGINIA
JOSH M MACDONALD
Lic. No. 0402057995
11/14/2025
PROFESSIONAL ENGINEER

KHA PROJECT
113706001
DATE
11/14/2025
SCALE AS SHOWN
DESIGNED BY
STM
DRAWN BY
STM
CHECKED BY
JMM

PROJECT HERCULES

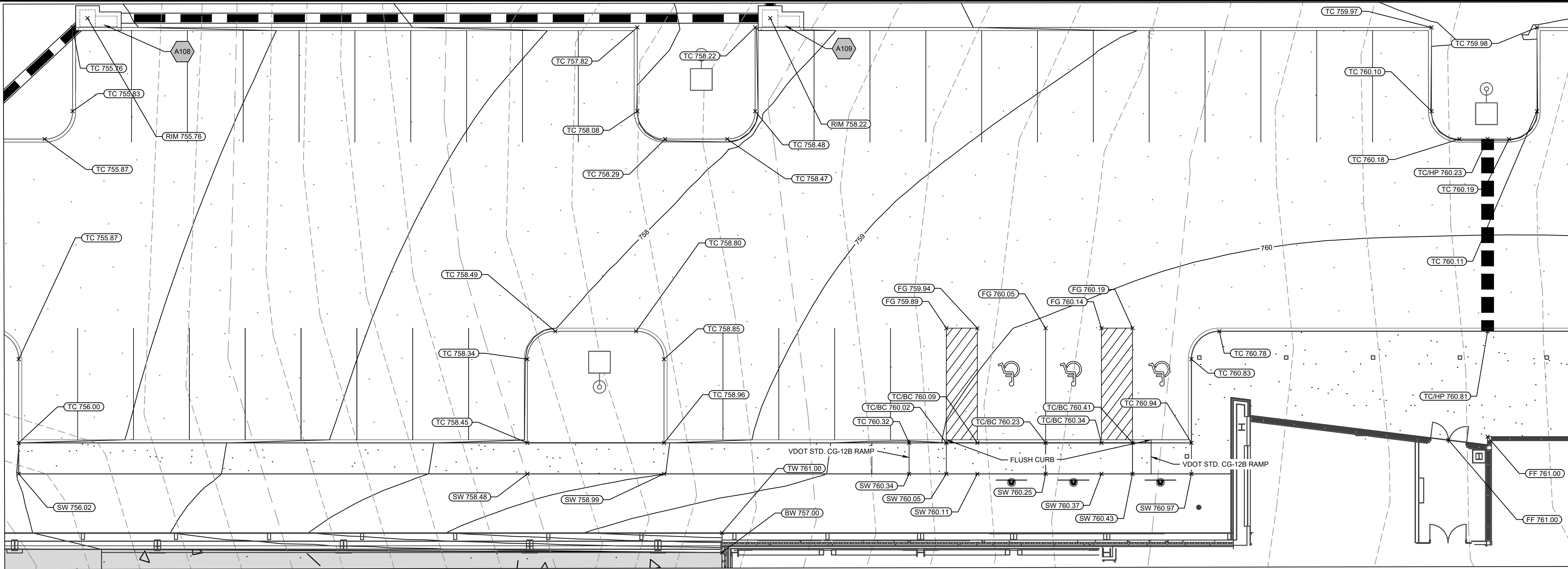
GRADING PLAN

VA

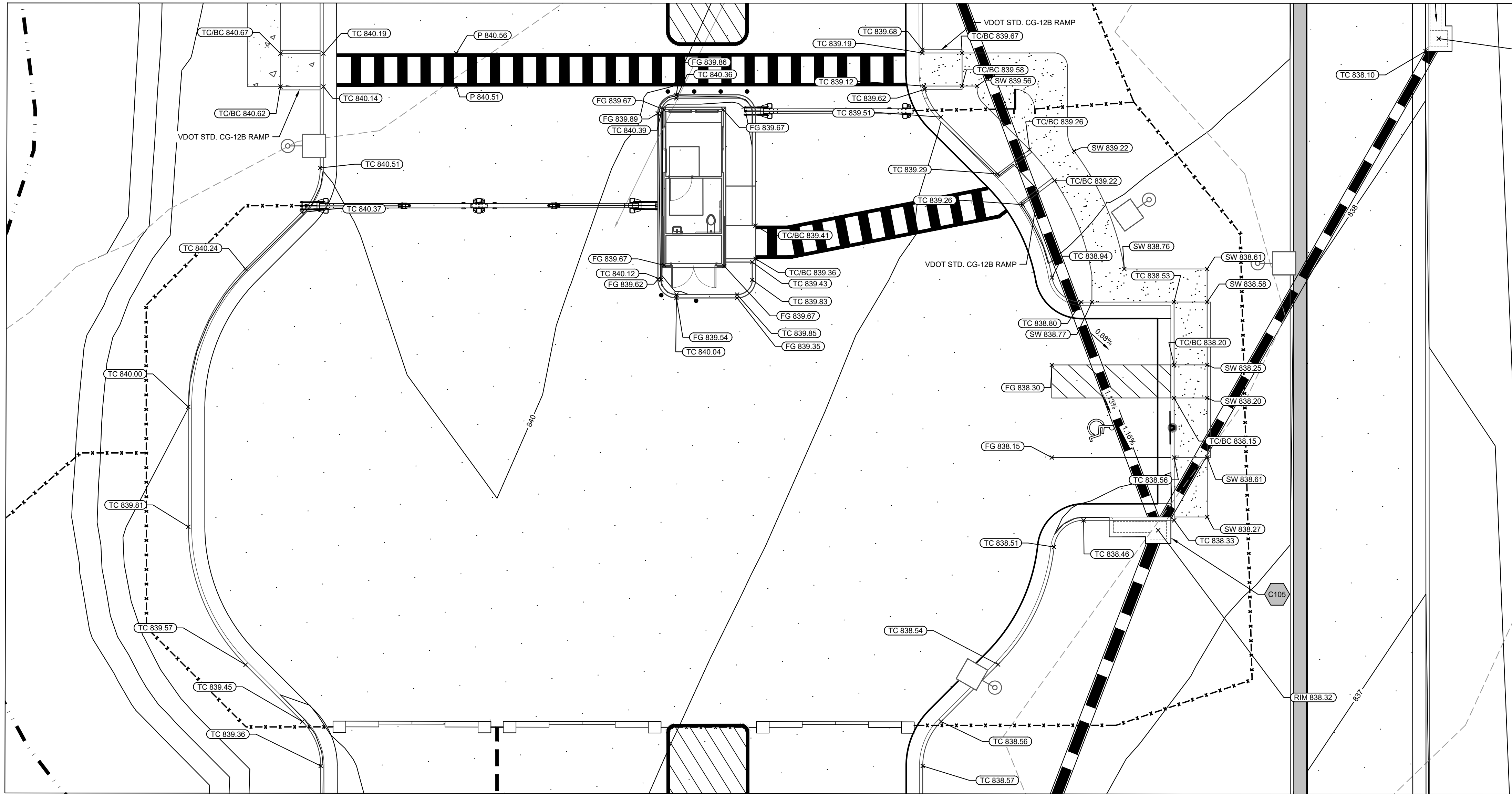
APPOMATTOX COUNTY

SHEET NUMBER
CG-107

Plotted By: McCray, Stephen Sheet Set: KHA Layout: CG-108 DETAILED GRADING PLAN November 08, 2025 04:35:48pm
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INSET A



INSET B

GRADING LEGEND

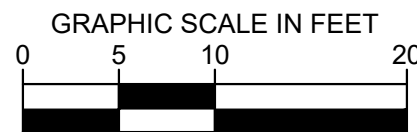
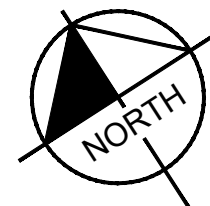
- 01 STRUCTURE LABEL
- SCC-XX STORMWATER CONVEYANCE CHANNEL
- TC: TOP OF CURB ELEVATION
- BC: BOTTOM OF CURB ELEVATION
- FFE: FINISHED FLOOR ELEVATION
- FG: FINISHED SURFACE ELEVATION
- P: PAVEMENT ELEVATION
- G: GROUND ELEVATION
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- BD: BOTTOM OF DITCH
- HP: HIGH POINT
- (ME): MATCH EXISTING
- SW: SIDEWALK
- RIM: RIM OF STORM STRUCTURE
- SPILLING CURB AND GUTTER

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- SEE SHEET CE-503 FOR STORMWATER CONVEYANCE CHANNEL CALCULATIONS. CONTRACTOR TO INSTALL CHANNEL LININGS AS NOTED IN THE "PHASE II ETS AND POST DEVELOPMENT DITCH DESIGN SUMMARY TABLE" ON SHEET CE-503.

TRANSCONTINENTAL GAS PIPELINE RIGHT-OF-WAY WORK NOTES

- ONSITE: AN AUTHORIZED WILLIAMS REPRESENTATIVE MUST BE ON SITE PRIOR TO AND DURING ANY SURFACE DISTURBING WORK WITHIN THE TRANSCONTINENTAL GAS PIPELINE RIGHT-OF-WAY. THE AUTHORIZED COMPANY WILL ASSIST IN DETERMINING THE LOCATION OF THE PIPELINES, THE ROW WIDTH, AND THE EXISTING COVER OVER THE PIPELINE AND WILL REMAIN ON SITE TO MONITOR ALL ACTIVITIES WITHIN THE ROW.
- VIBRATORY EQUIPMENT: VIBRATORY EQUIPMENT IS PROHIBITED WITHIN THE LIMITS OF THE COMPANY ROW. VIBRATORY EQUIPMENT IS NOT PERMITTED TO BE USED FOR ACHIEVING APPLICABLE COMPACTION REQUIREMENTS.
- EXCAVATION: NO MACHINE EXCAVATION ALLOWED WITHIN 2 FEET OF ANY COMPANY PIPELINE. REMOVE SIDE CUTTERS FROM THE BUCKET, WELD OR ATTACH A BAR ACROSS THE TEETH.
- CROSSING ANGLE: ROADS AND UTILITIES SHALL CROSS AS CLOSE TO 90° AS POSSIBLE.
- NO HORIZONTAL OR VERTICAL BENDS ARE PERMITTED WITHIN COMPANY ROW.



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Kimley-Horn

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JOSH M. MACDONALD
Lic. No. 0402057995
11/14/2025

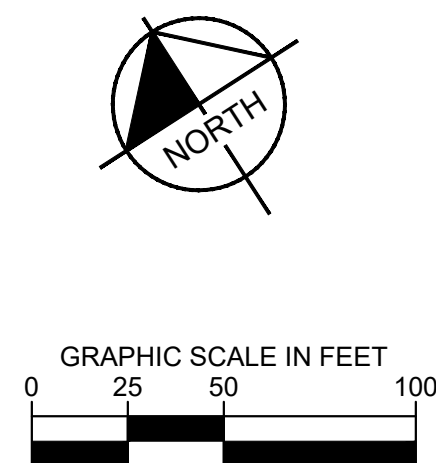
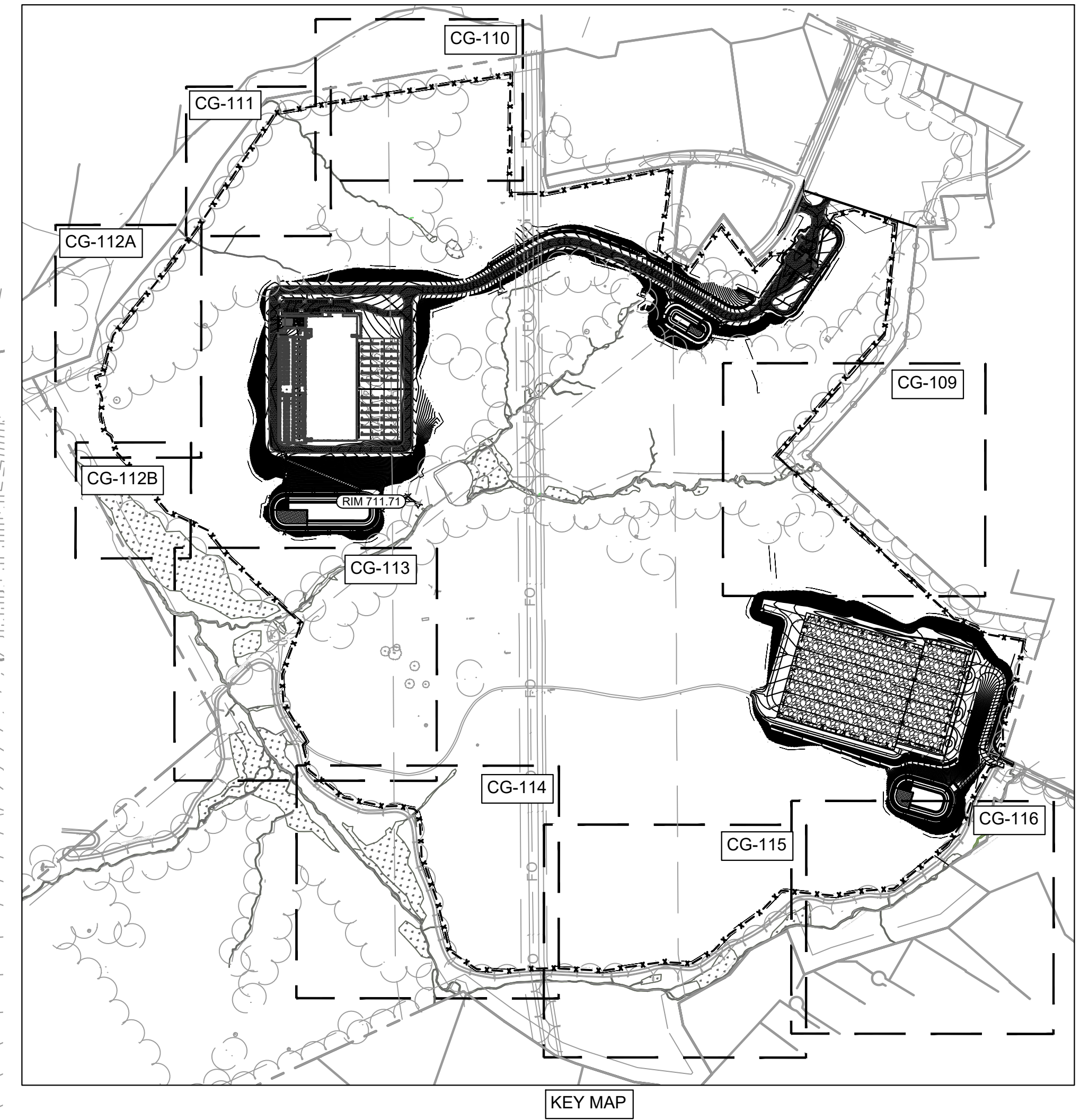
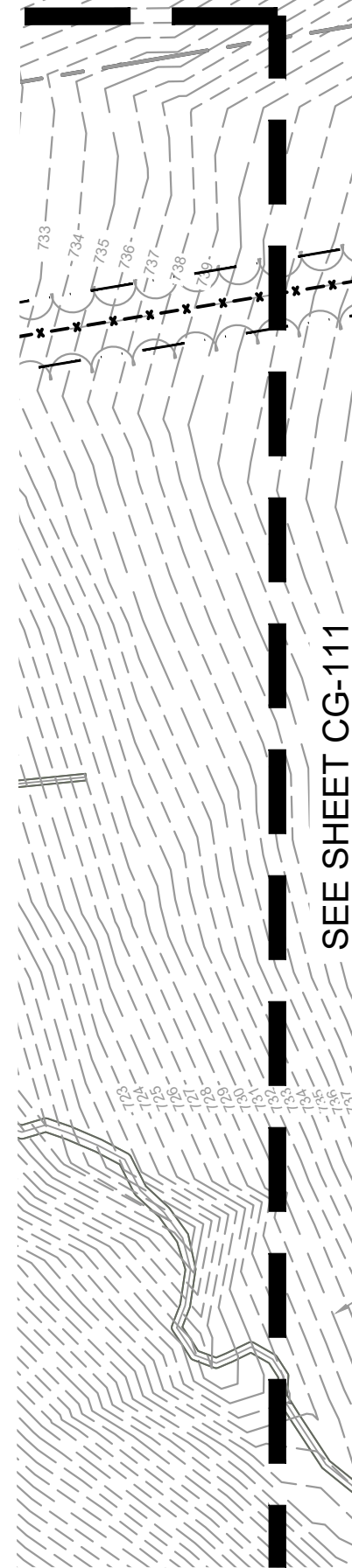
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DETAILED GRADING PLAN

PROJECT HERCULES

APPOMATTOX COUNTY VA

SHEET NUMBER
CG-108



Plotted By:McCray, Stephen Sheet Set:Kha Layout:CG-10 SITE FENCE EXTENSION November 05, 2025 04:37:07pm
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COMMONWEALTH OF VIRGINIA
Josh M. MacDonald
 JOSH M MACDONALD
 Lic. No. 0402057995
 11/14/2015
 PROFESSIONAL ENGINEER

KHA PROJECT 113706001	DATE 11/14/2025
SCALE	AS SHOWN
DESIGNED BY	STM
DRAWN BY	STM
CHECKED BY	JMM

SITE FENCE EXTENSION

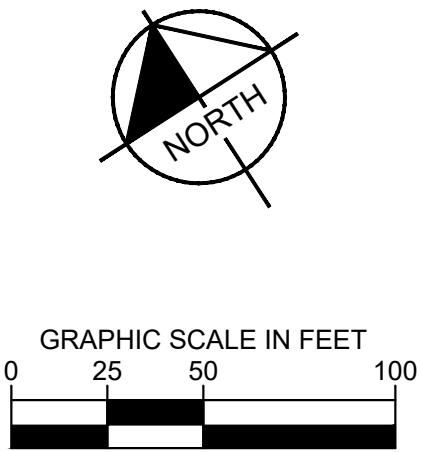
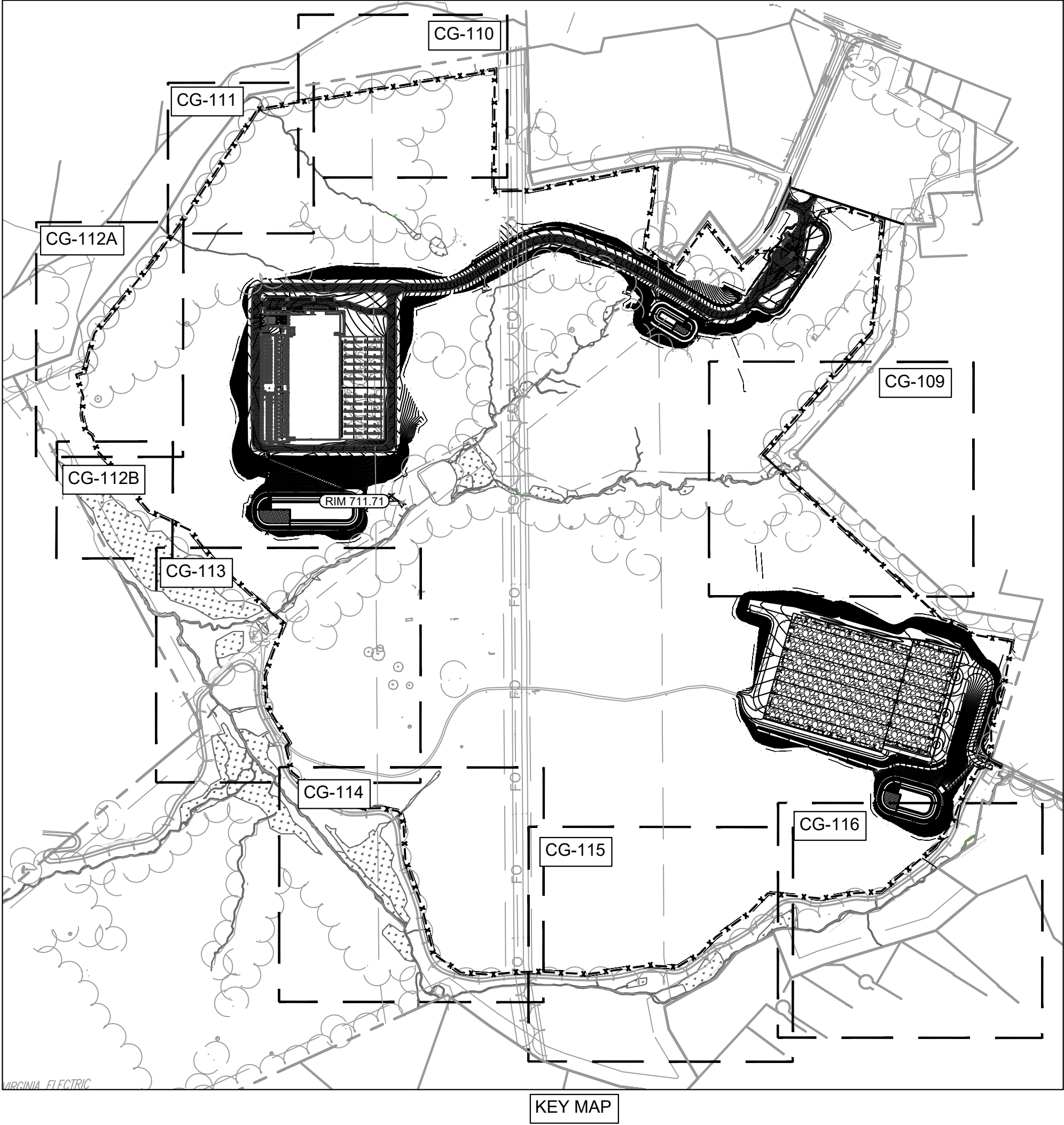
PROJECT HERCULES

SHEET NUMBER
CG-110

APPOMATTOX COUNTY

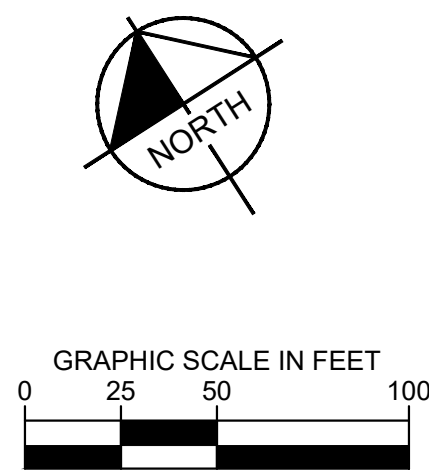
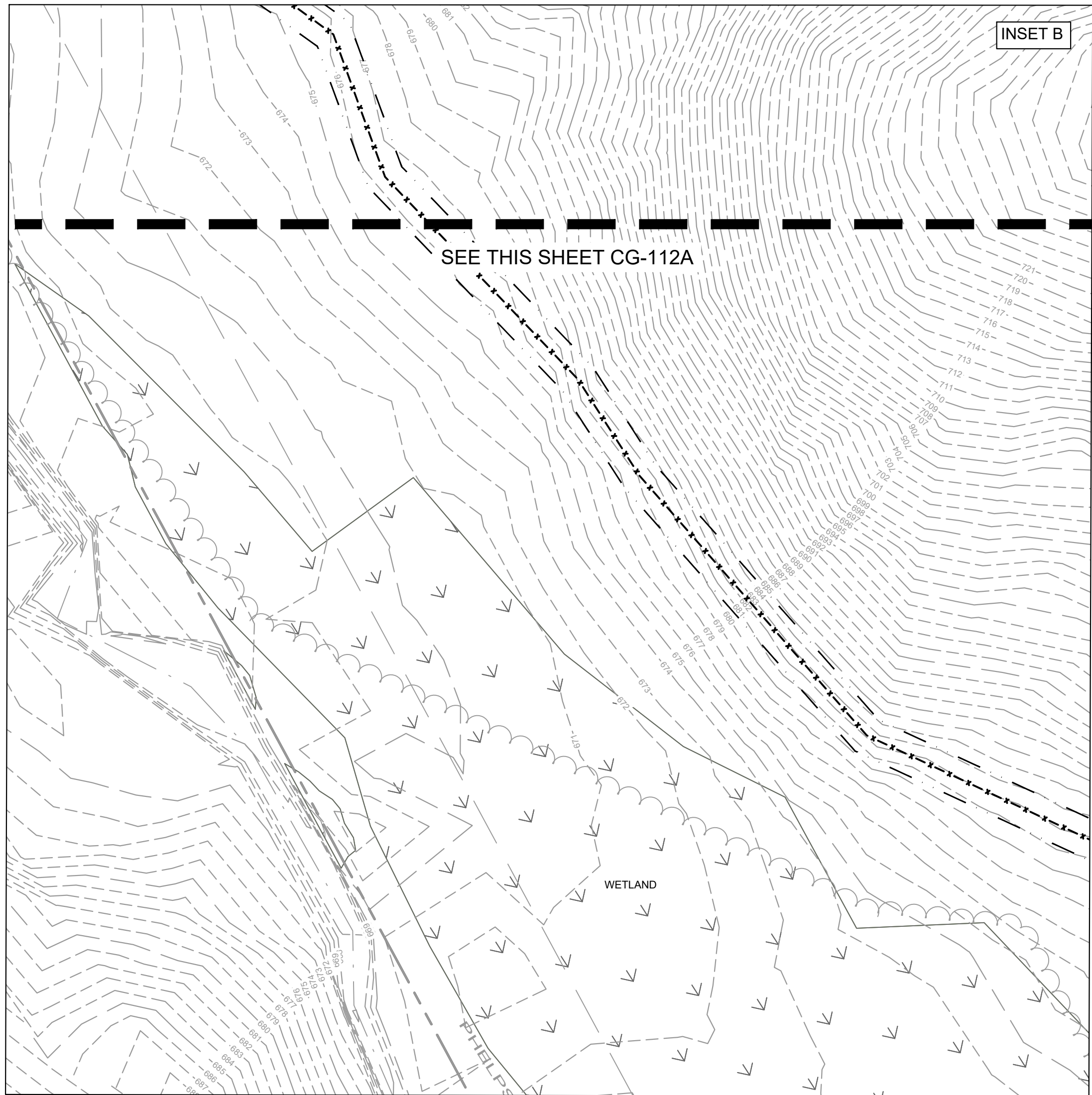
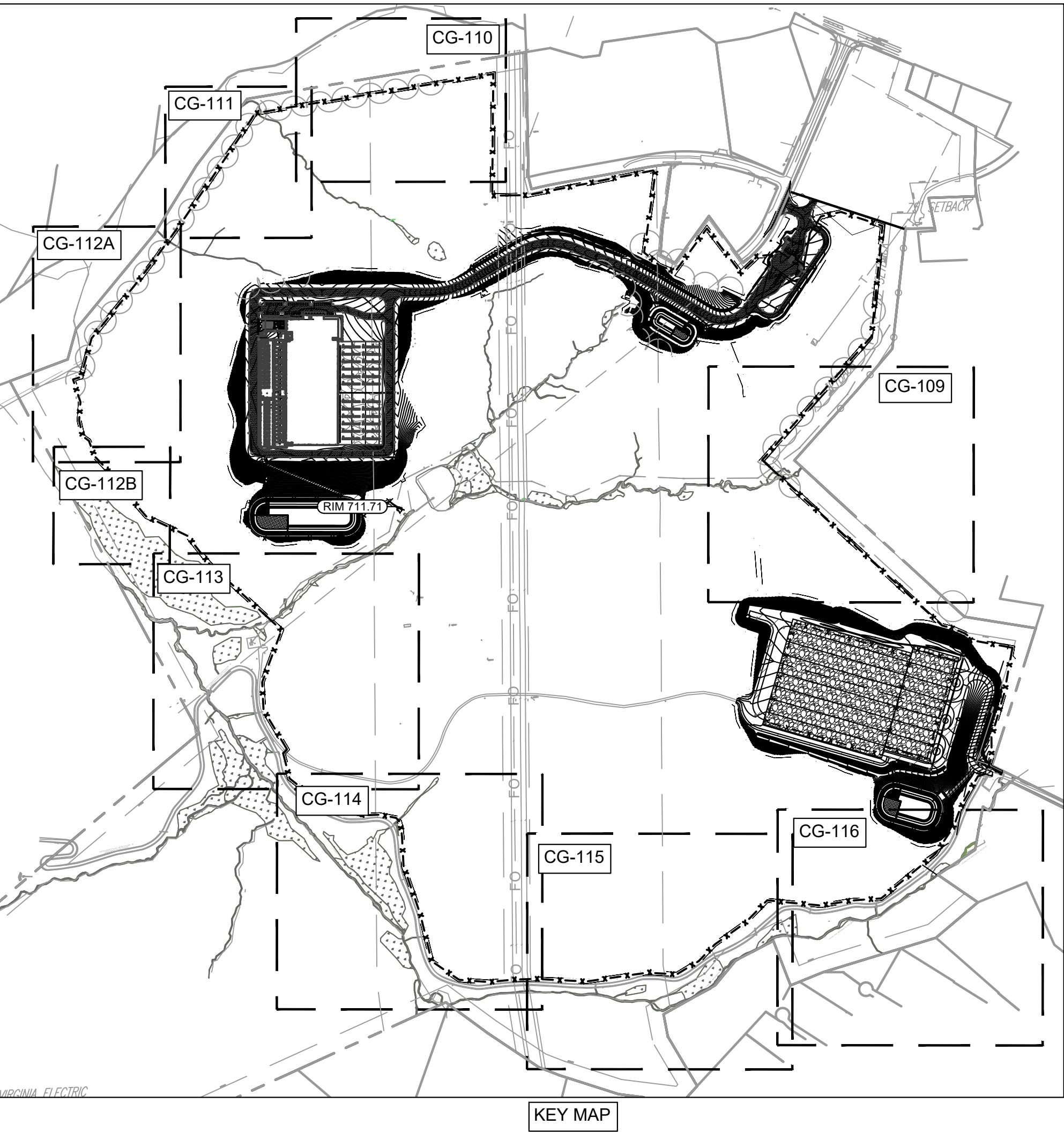
VA

Jacobs



PROJECT HERCULES	SITE FENCE EXTENSION														
SHEET NUMBER CG-111	APPOMATTOX COUNTY VA		© 2025 KIMLEY-HORN AND ASSOCIATES, INC. 6806 PARAGON PLACE, SUITE 310, RICHMOND, VA 23230 PHONE: 804-673-8882 WWW.KIMLEY-HORN.COM												
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DATE	11/14/2025														
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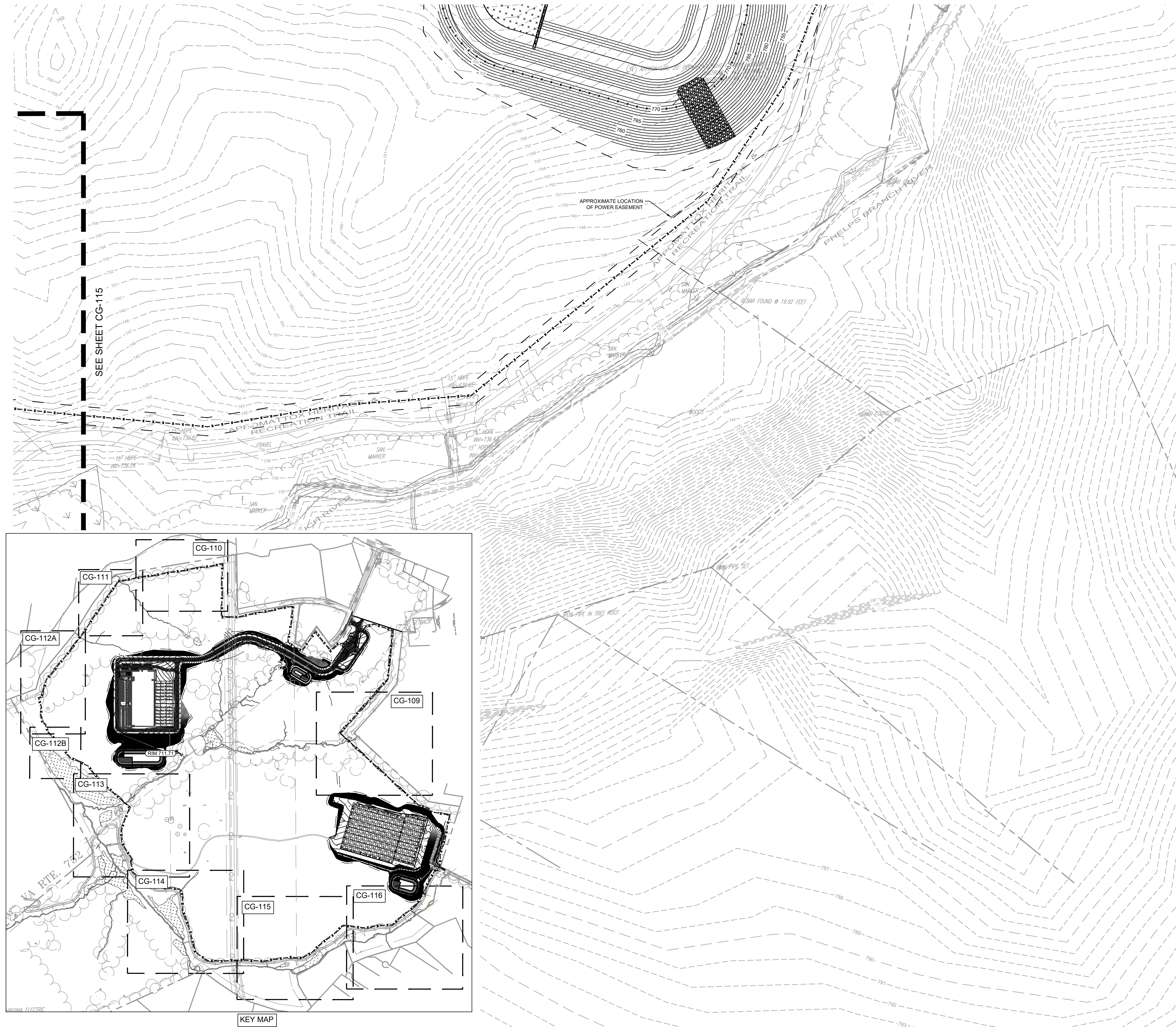


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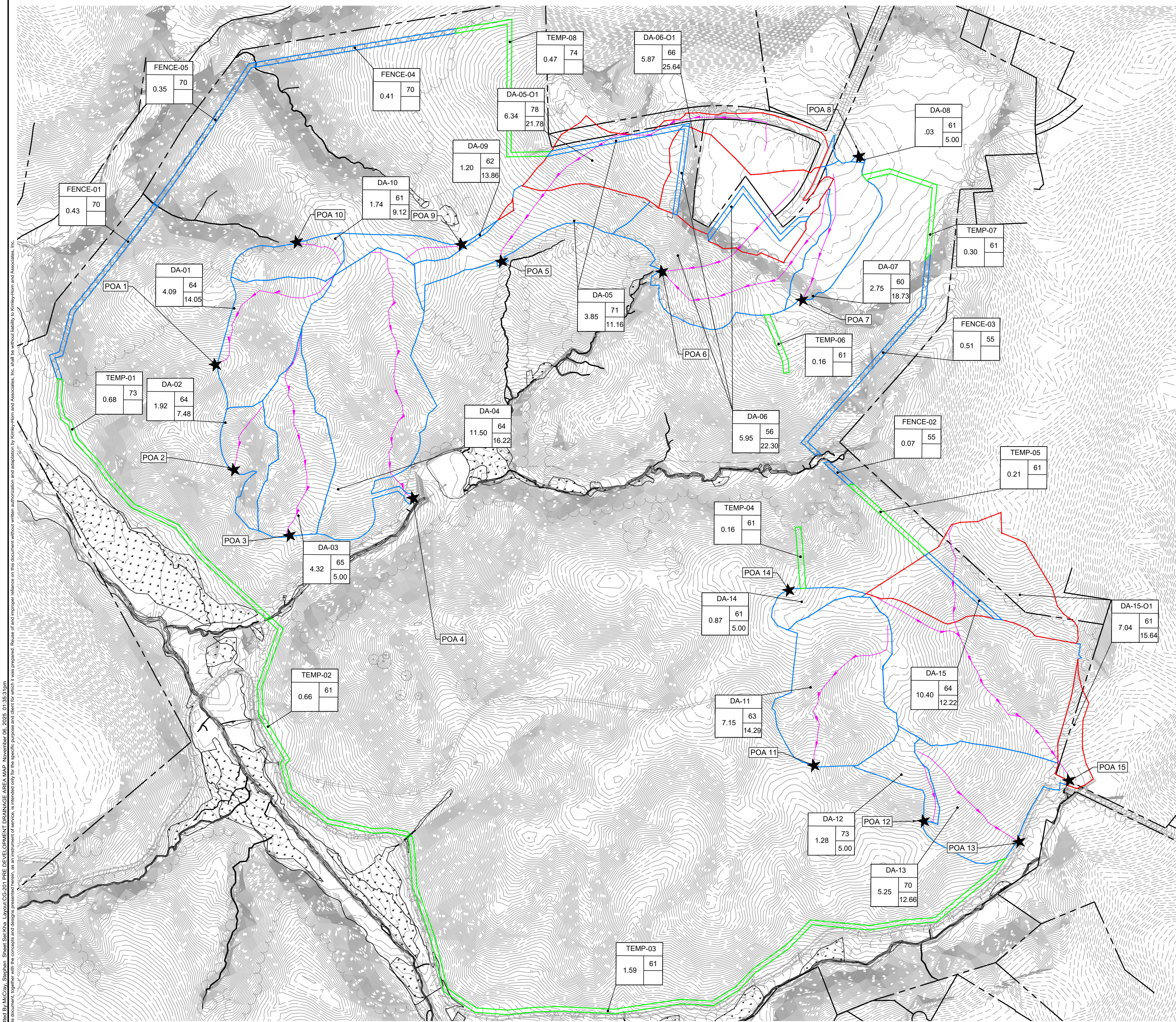


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Printed by: Stephen, Stephen Sheet Sat:Kha Layout:CG-116 SITE FENCE EXTENSION November 05, 2025 04:40:52pm

PROJECT HERCULES		SITE FENCE EXTENSION		KHA PROJECT 113706001	
APPOMATTOX COUNTY		VA		DATE 11/14/2025	
SHEET NUMBER		CG-116		SCALE AS SHOWN	
				DESIGNED BY STM	
				DRAWN BY STM	
				CHECKED BY JMM	



DRAINAGE AREA MAP LEGEND

- ONSITE DRAINAGE AREA BOUNDARY
- OFFSITE DRAINAGE AREA BOUNDARY
- TEMPORARY WORKSPACE
- TIME OF CONCENTRATION
- LIMITS OF DISTURBANCE

A	C
B	D

DRAINAGE AREA LABEL
A - DRAINAGE AREA NAME
B - AREA (AC)
C - RUNOFF COEFFICIENT
D - TIME OF CONCENTRATION (MIN.)

★ ANALYZED POA
★ RUNOFF HAS BEEN REROUTED TO ANOTHER POA

GRAPHIC SCALE IN FEET
0 100 200 400

NORTH

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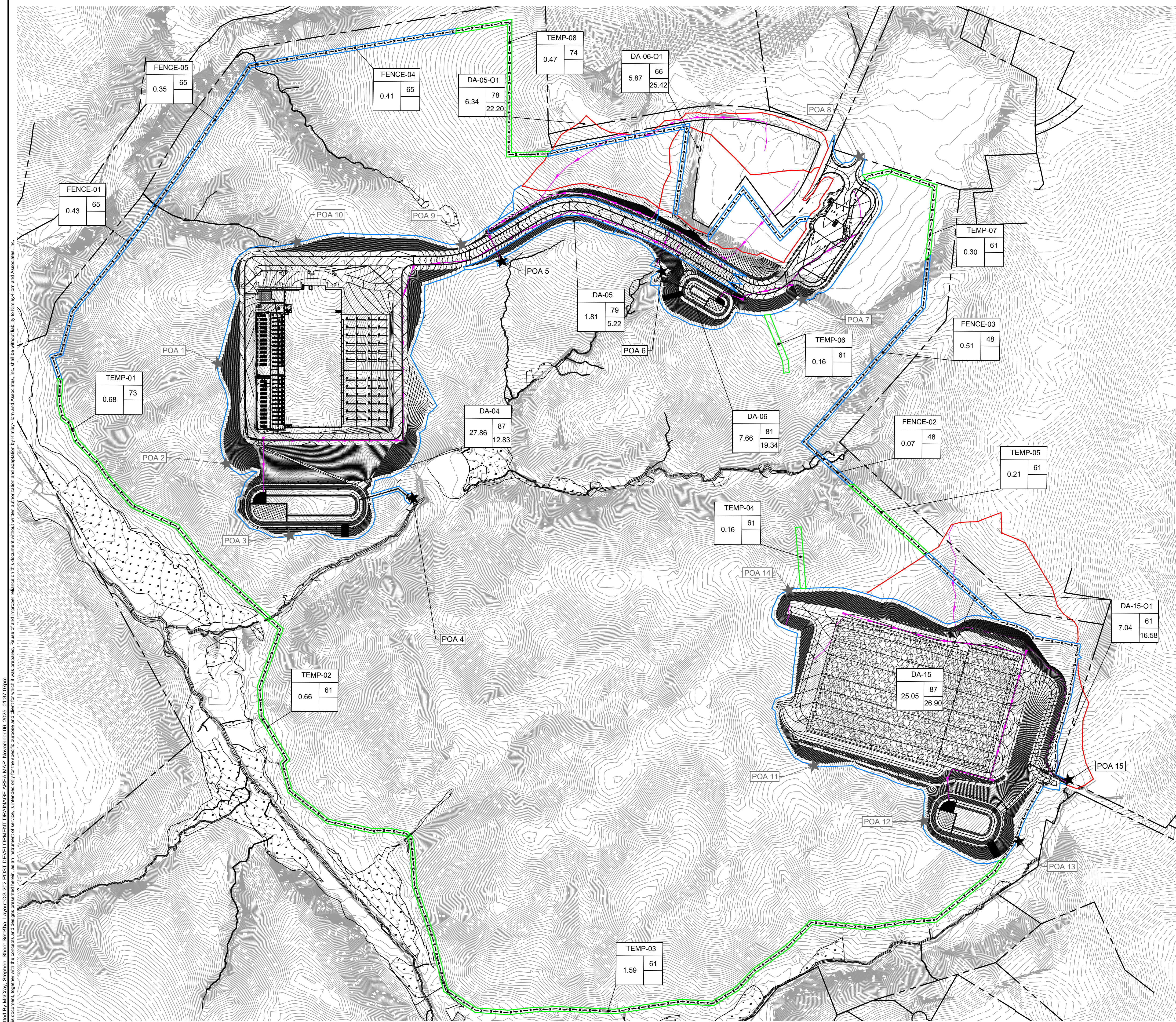
PROJECT HERCULES

PRE DEVELOPMENT DRAINAGE AREA MAP

VA

APPOMATTOX COUNTY

SHEET NUMBER
CG-201



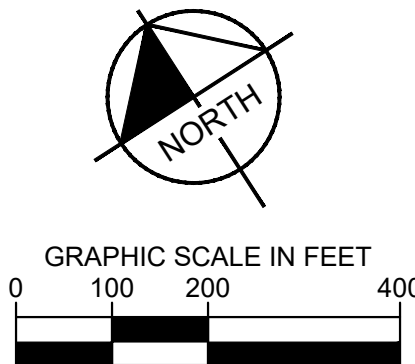
DRAINAGE AREA MAP LEGEND

- ONSITE DRAINAGE AREA BOUNDARY
- OFFSITE DRAINAGE AREA BOUNDARY
- TEMPORARY WORKSPACE
- TIME OF CONCENTRATION
- LIMITS OF DISTURBANCE

A	C
B	D

DRAINAGE AREA LABEL
A - DRAINAGE AREA NAME
B - AREA (AC)
C - RUNOFF COEFFICIENT
D - TIME OF CONCENTRATION (MIN.)

★ ANALYZED POA
★ RUNOFF HAS BEEN REROUTED TO ANOTHER POA



PROJECT HERCULES

POST DEVELOPMENT DRAINAGE AREA MAP

APPOMATTOX COUNTY

SHEET NUMBER CG-202

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KHA PROJECT 113706001

DATE 11/14/2025

SCALE AS SHOWN

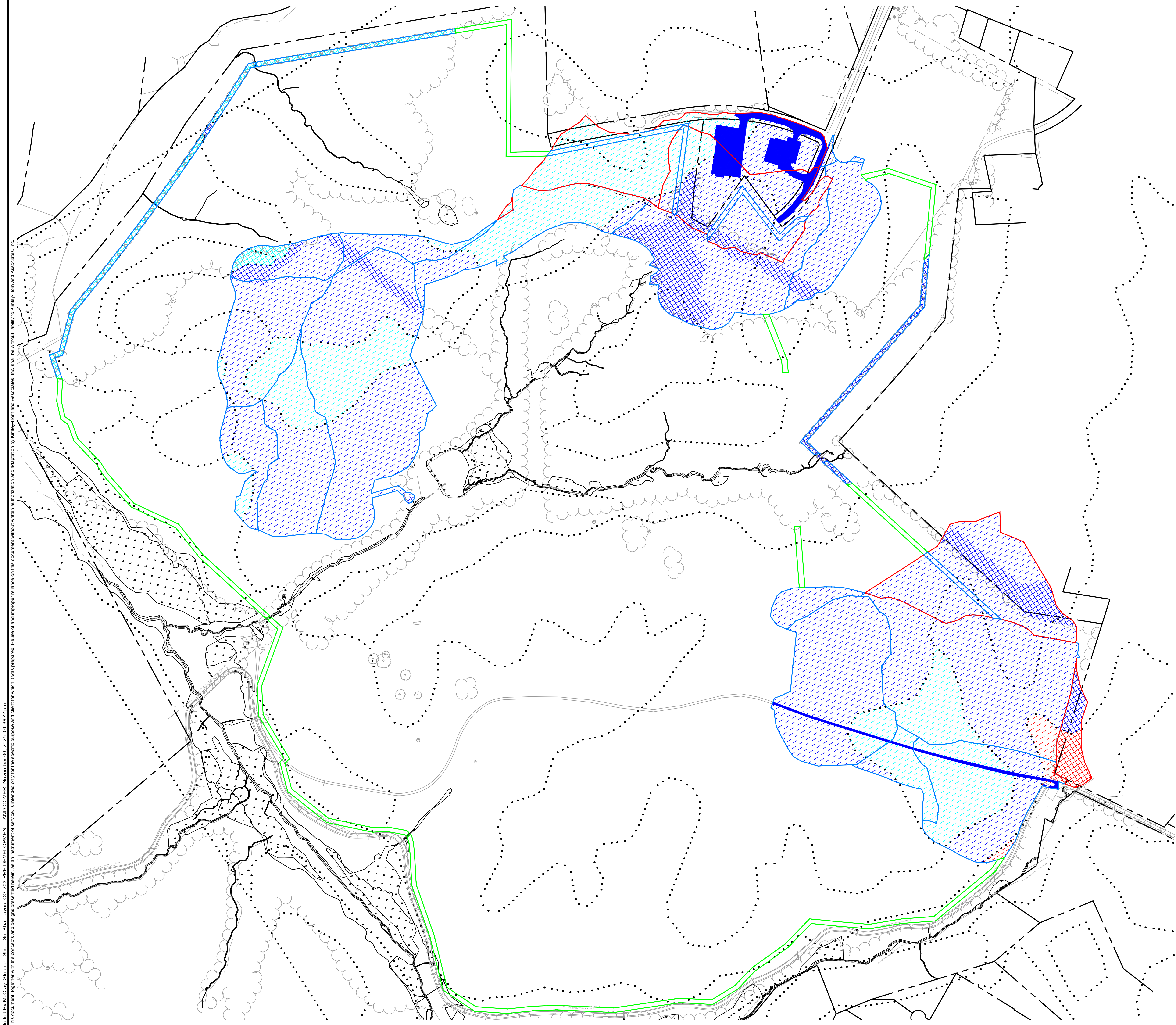
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CHECKED BY JMM

Plotted By: McGraw, Stephen Sheet Set: KHA Layout: CG-202 POST DEVELOPMENT DRAINAGE AREA MAP November 08, 2025 01:37:07pm

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- PRE-DEV DRAINAGE AREA MAP LEGEND**
- FORESTED AREA - B SOILS
 - FORESTED AREA - C SOILS
 - FORESTED AREA - D SOILS
 - PASTURE AREA - B SOILS
 - PASTURE AREA - C SOILS
 - PASTURE AREA - D SOILS
 - IMPERVIOUS AREA
 - BRUSH AREA - B SOILS
 - BRUSH AREA - C SOILS
 - BRUSH AREA - D SOILS
 - SOIL TYPE BOUNDARY
 - ONSITE DRAINAGE AREA BOUNDARY
 - OFFSITE DRAINAGE AREA BOUNDARY
 - TEMPORARY WORKSPACE
 - LAND DISTURBANCE BOUNDARY

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PROJECT HERCULES

APPOMATTOX COUNTY

SHEET NUMBER
CG-203

PRE DEVELOPMENT
LAND COVER

VA

KHA PROJECT
113706001

DATE
11/14/2025

SCALE AS SHOWN

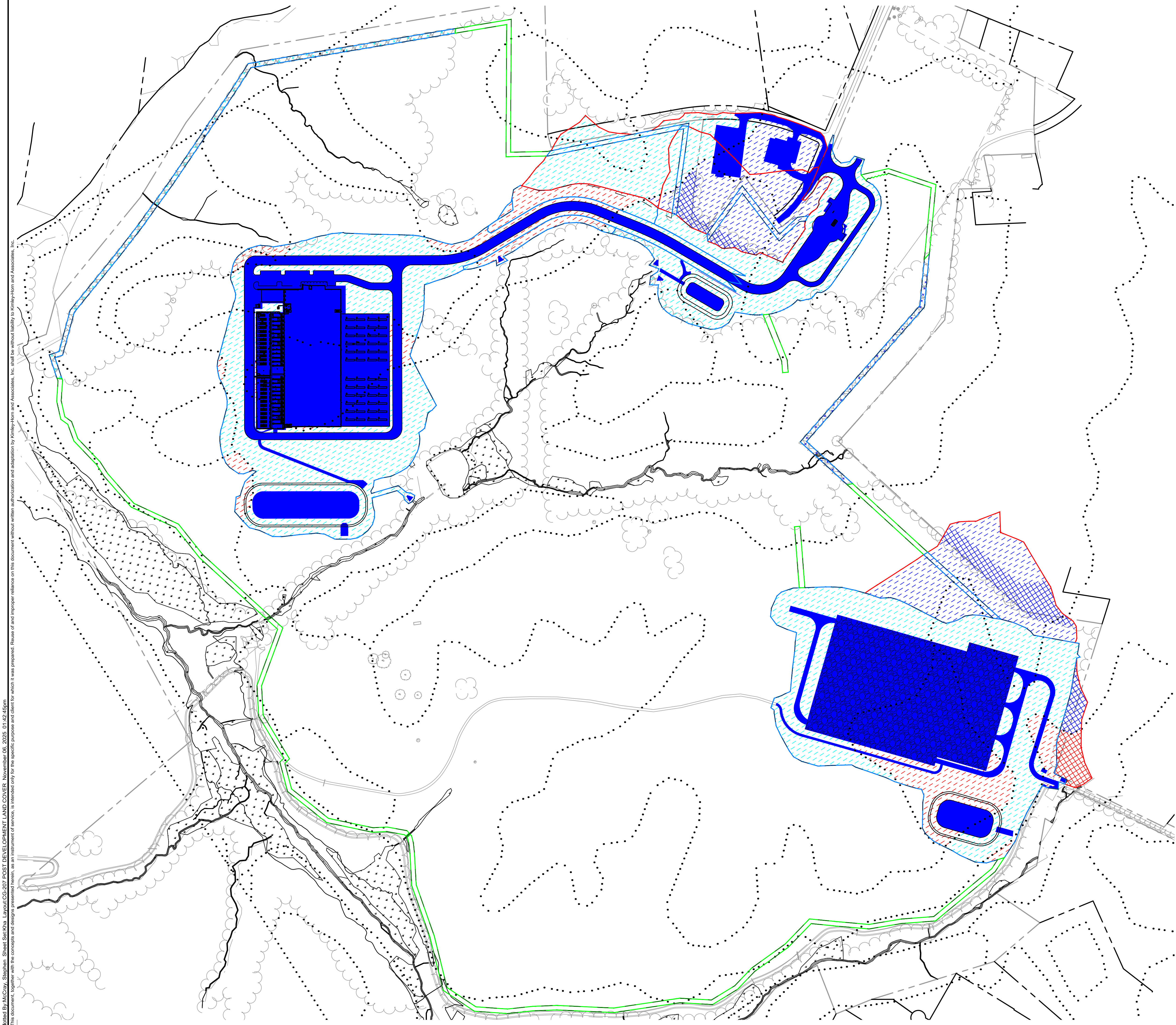
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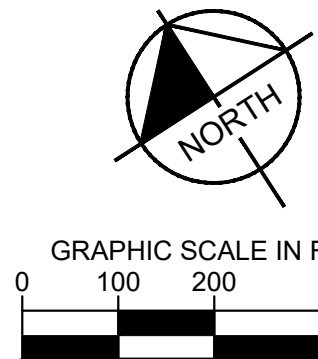
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- POST-DEV DRAINAGE AREA MAP LEGEND**
- FORESTED AREA - B SOILS
 - FORESTED AREA - C SOILS
 - FORESTED AREA - D SOILS
 - MANAGED TURF AREA - B SOILS
 - MANAGED TURF AREA - C SOILS
 - MANAGED TURF AREA - D SOILS
 - IMPERVIOUS AREA
 - BRUSH AREA - B SOILS
 - BRUSH AREA - C SOILS
 - BRUSH AREA - D SOILS
 - SOIL TYPE BOUNDARY
 - ONSITE DRAINAGE AREA BOUNDARY
 - OFFSITE DRAINAGE AREA BOUNDARY
 - TEMPORARY WORKSPACE
 - LAND DISTURBANCE BOUNDARY



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PROJECT HERCULES

APPOMATTOX COUNTY

SHEET NUMBER
CG-204

POST DEVELOPMENT
LAND COVER

VA

KHA PROJECT
113706001

DATE
11/14/2025

SCALE AS SHOWN

DESIGNED BY

DRAWN BY

CHECKED BY

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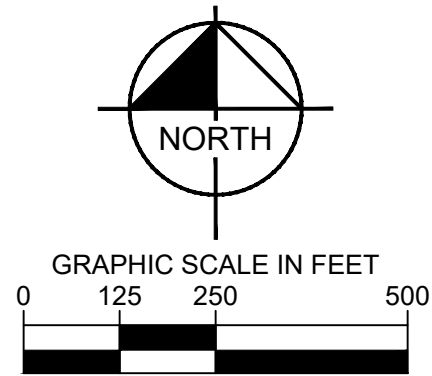
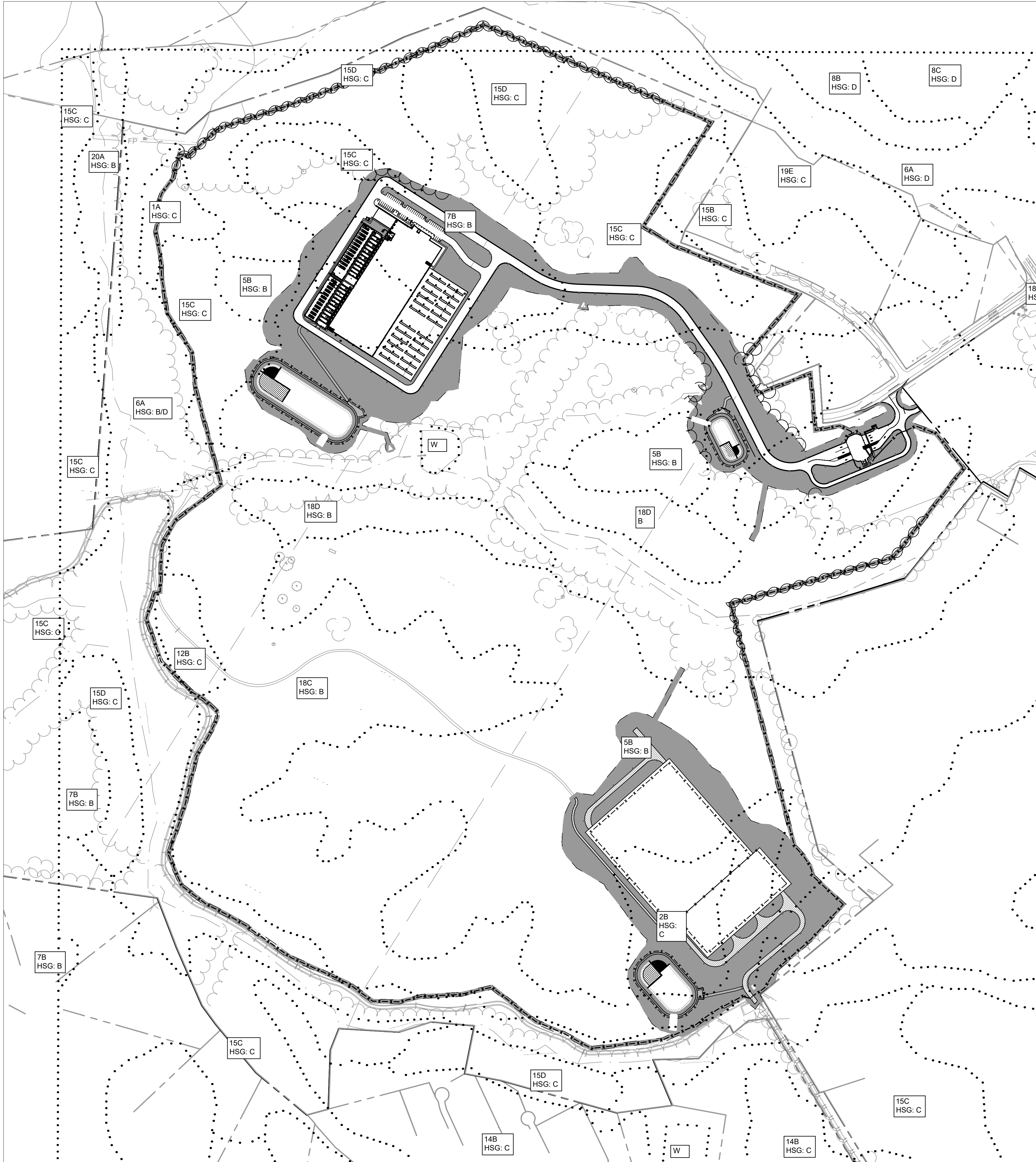
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Plotted By:McGray, Stephen Sheet Set:Kha Layout:CG-205 STORMWATER QUALITY PLAN November 05, 2025 01:44:38pm
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STORMWATER QUALITY LEGEND

- IMPERVIOUS COVER
MANAGED TURF
LIMITS OF DISTURBANCE

STORMWATER QUALITY - SITE INFORMATION

Project Name: Project Hercules - Appomattox
Date: 11/6/2025
BMP Design Specifications List: 2024 Sids & Specs

CLEAR ALL
(Shift+F10)

data input calls
constant values
calculation calls
final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Land Cover (acres)	A Soils	B Soils	C Soils	D Soils	Totals
Forest (acres) - undisturbed, protected forest or reforested land	0.00	0.00	0.00	0.00	0.00
Mixed Open (acres) - undisturbed/frequently maintained grass or shrub land	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres) - disturbed, graded for yards or other turf to be mowed/managed	0.00	27.74	7.00	4.95	39.69
Impervious Cover (acres)	0.00	0.00	0.00	28.69	28.69
					68.38

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr) 35.02

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary	Treatment Volume and Nutrient Loads
Forest Cover (acres)	0.00
Weighted By Forest	0.00
% Forest	0%
Mixed Open (acres)	0.00
Weighted By (mixed open)	0.00
% Mixed Open	0%
Managed Turf Cover (acres)	39.69
Weighted By (turf)	0.21
% Managed Turf	58%
Impervious Cover (acres)	28.69
By (Impervious)	0.95
% Impervious	42%
Site Area (acres)	68.38
Site By	0.26

Constants

Target Rainfall Event (inches)	1.00
Target TP Load (lb/acre/yr)	0.26

Runoff Coefficients (Rv)

	A Soils	B Soils	C Soils	D Soils
Forest	0.02	0.03	0.04	0.05
Mixed Open	0.08	0.11	0.13	0.15
Managed Turf	0.15	0.20	0.22	0.25
Impervious Cover	0.95	0.95	0.95	0.95

STORMWATER QUALITY COMPLIANCE

Site Results (Water Quality Compliance) VRRM 4.1, 2024

Area Checks	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
FOREST (ac)	0.00	0.00	0.00	0.00	0.00	OK
MIXED OPEN AREA (ac)	0.00	0.00	0.00	0.00	0.00	OK
MIXED OPEN AREA TREATED (ac)	0.00	0.00	0.00	0.00	0.00	OK
MANAGED TURF AREA (ac)	13.56	5.56	13.77	0.00	0.00	OK
MANAGED TURF AREA TREATED (ac)	13.56	5.56	13.77	0.00	0.00	OK
IMPERVIOUS COVER (ac)	14.31	2.30	12.28	0.00	0.00	OK
IMPERVIOUS COVER TREATED (ac)	14.31	2.30	12.28	0.00	0.00	OK
AREA CHECK	OK	OK	OK	OK	OK	

Site Treatment Volume (ft³) 129,159

Runoff Reduction Volume and TP By Drainage Area

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
RUNOFF REDUCTION VOLUME ACHIEVED (ft ³)	0	0	0	0	0	0
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	22.57	5.54	20.37	0.00	0.00	48.48
TP LOAD REDUCTION ACHIEVED (lb/yr)	15.93	4.46	15.28	0.00	0.00	35.66
TP LOAD REMAINING (lb/yr)	6.64	1.07	5.09	0.00	0.00	12.72

NITROGEN LOAD REDUCTION ACHIEVED (lb/yr) 114.40 27.95 101.45 0.00 0.00 243.80

Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	53.80
TP LOAD REDUCTION REQUIRED (lb/yr)	35.02
TP LOAD REDUCTION ACHIEVED (lb/yr)	35.66
TP LOAD REMAINING (lb/yr)	18.14
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr)	0.00

** TARGET TP REDUCTION EXCEEDED BY 1.64 LB/YEAR **

Total Nitrogen (For Information Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	653.38
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	244.85
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	408.53

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COMMONWEALTH OF VIRGINIA

JOSH M. MACDONALD

Lic. No. 0402057995

11/14/2025

PROFESSIONAL ENGINEER

KHA PROJECT
113706001

DATE
11/14/2025

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STM

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STORMWATER
QUALITY PLAN

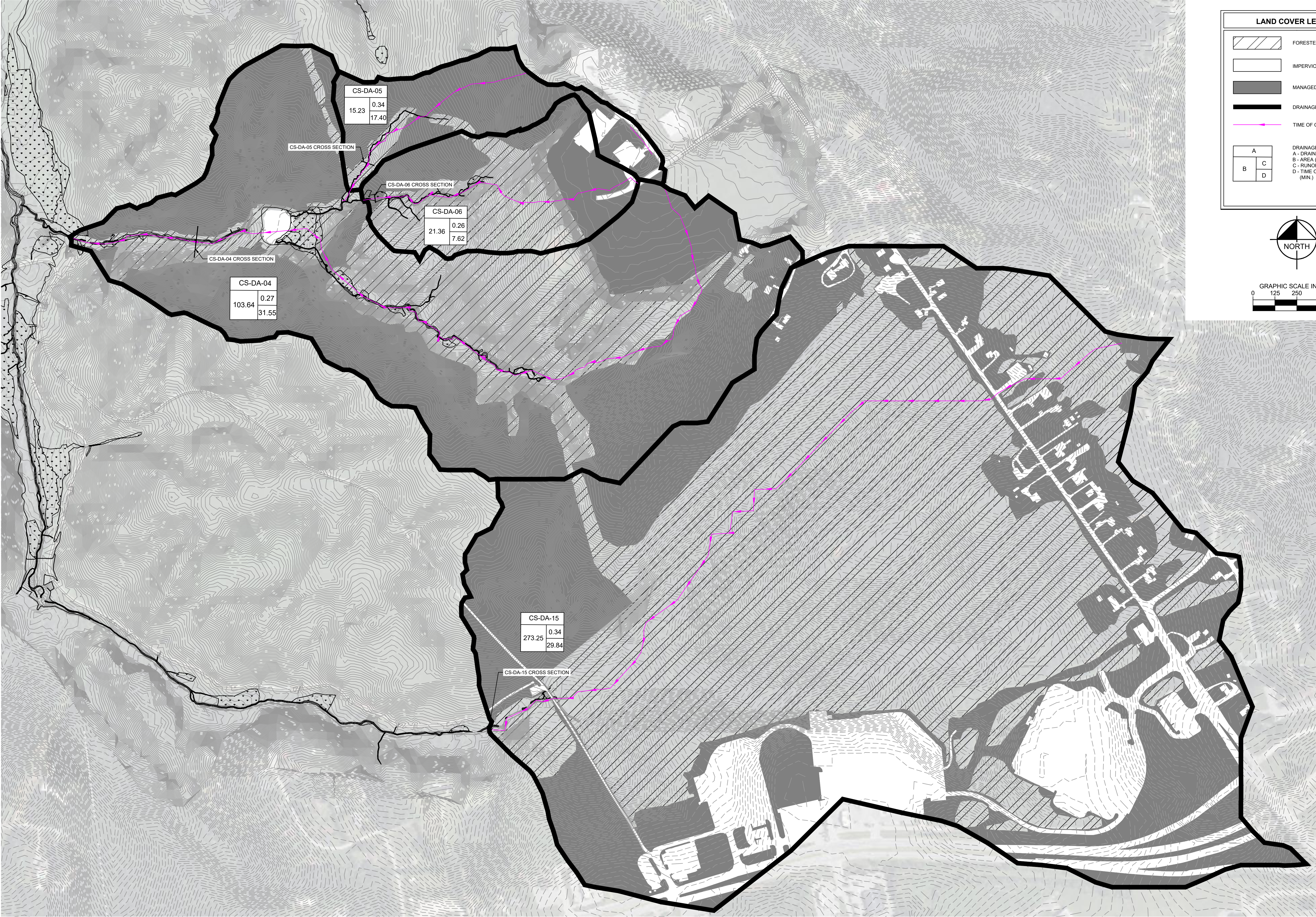
PROJECT HERCULES

CG-205

VA

APPOMATTOX COUNTY

Plotted By:McGray, Stephen Sheet Set:Kha Layout:CG-206 PRE DEVELOPMENT DOWNSTREAM ANALYSIS November 06, 2025 01:45:40pm
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PROJECT HERCULES

PRE DEVELOPMENT
DOWNSTREAM
ANALYSIS

KHA PROJECT
113706001

DATE
11/14/2025

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Lic. No. 0402057995

11/14/2025

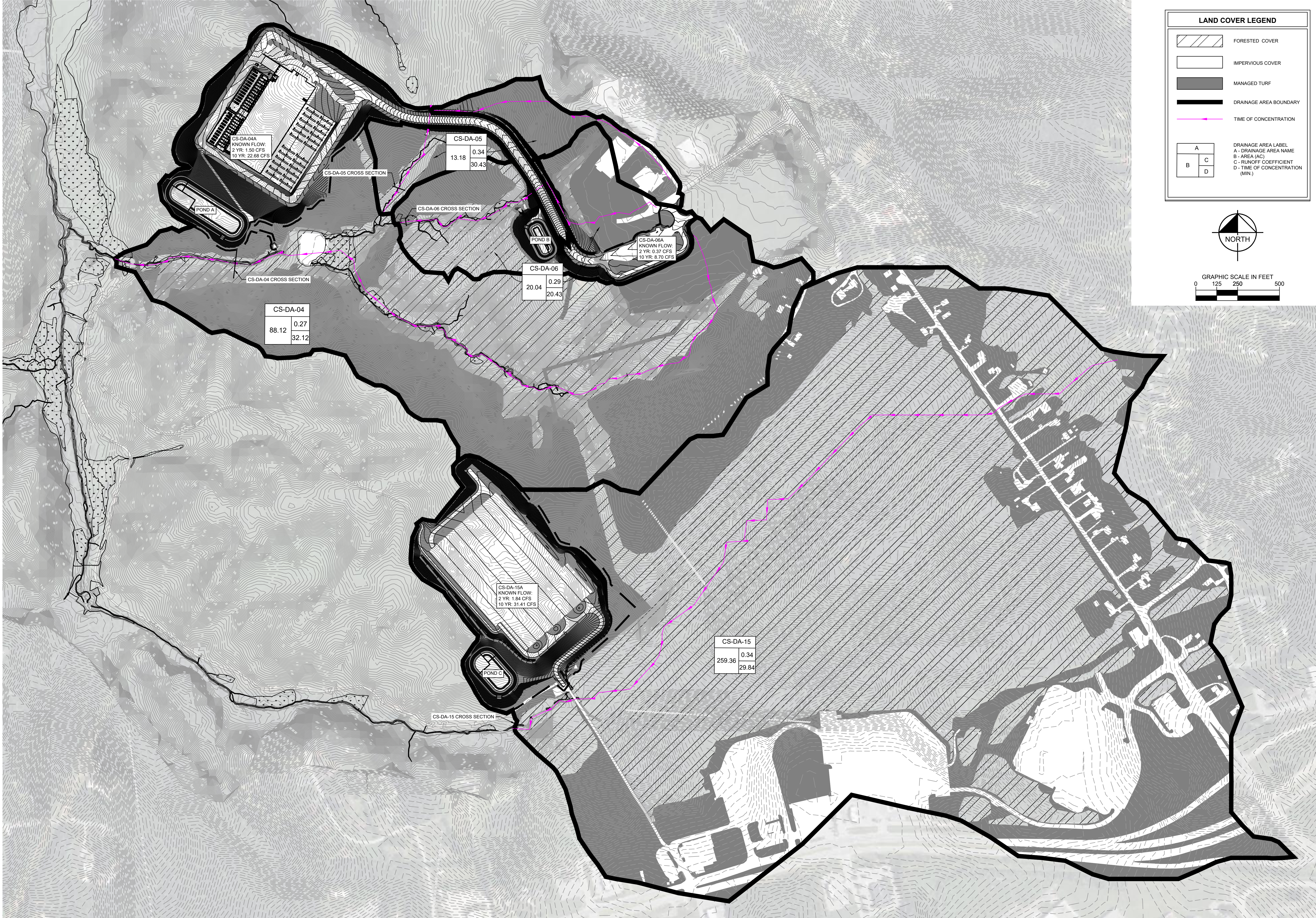
PROFESSIONAL ENGINEER

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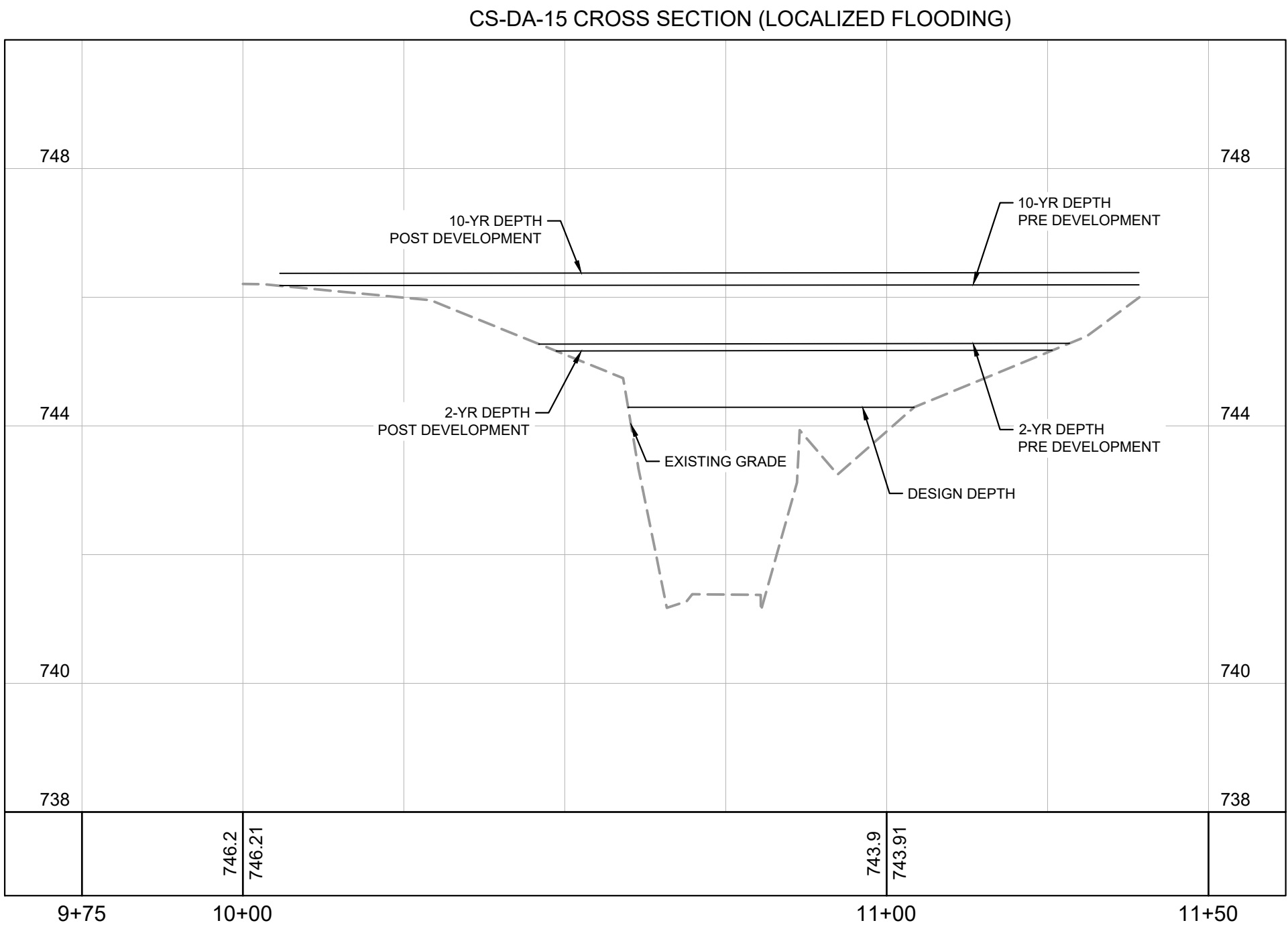
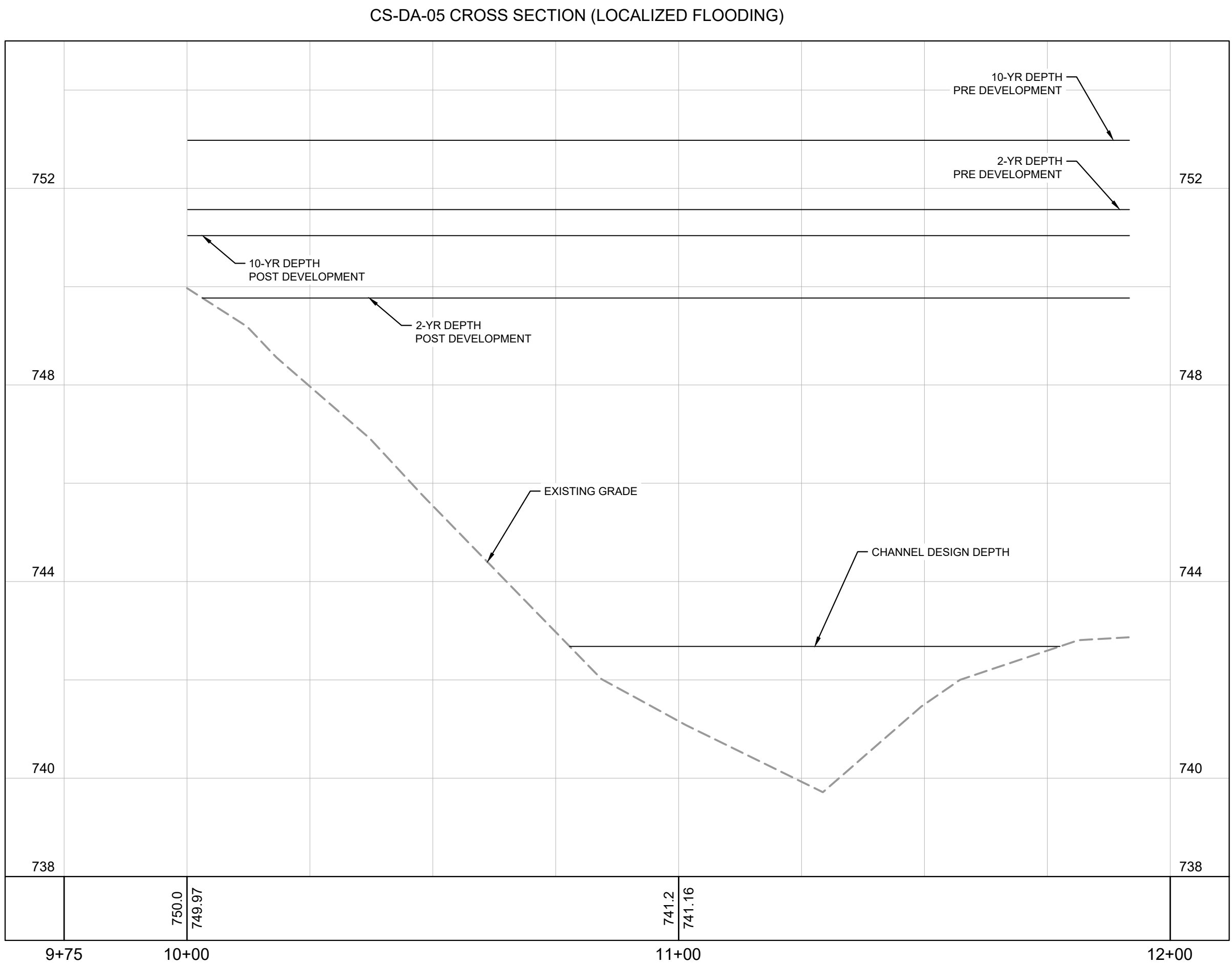
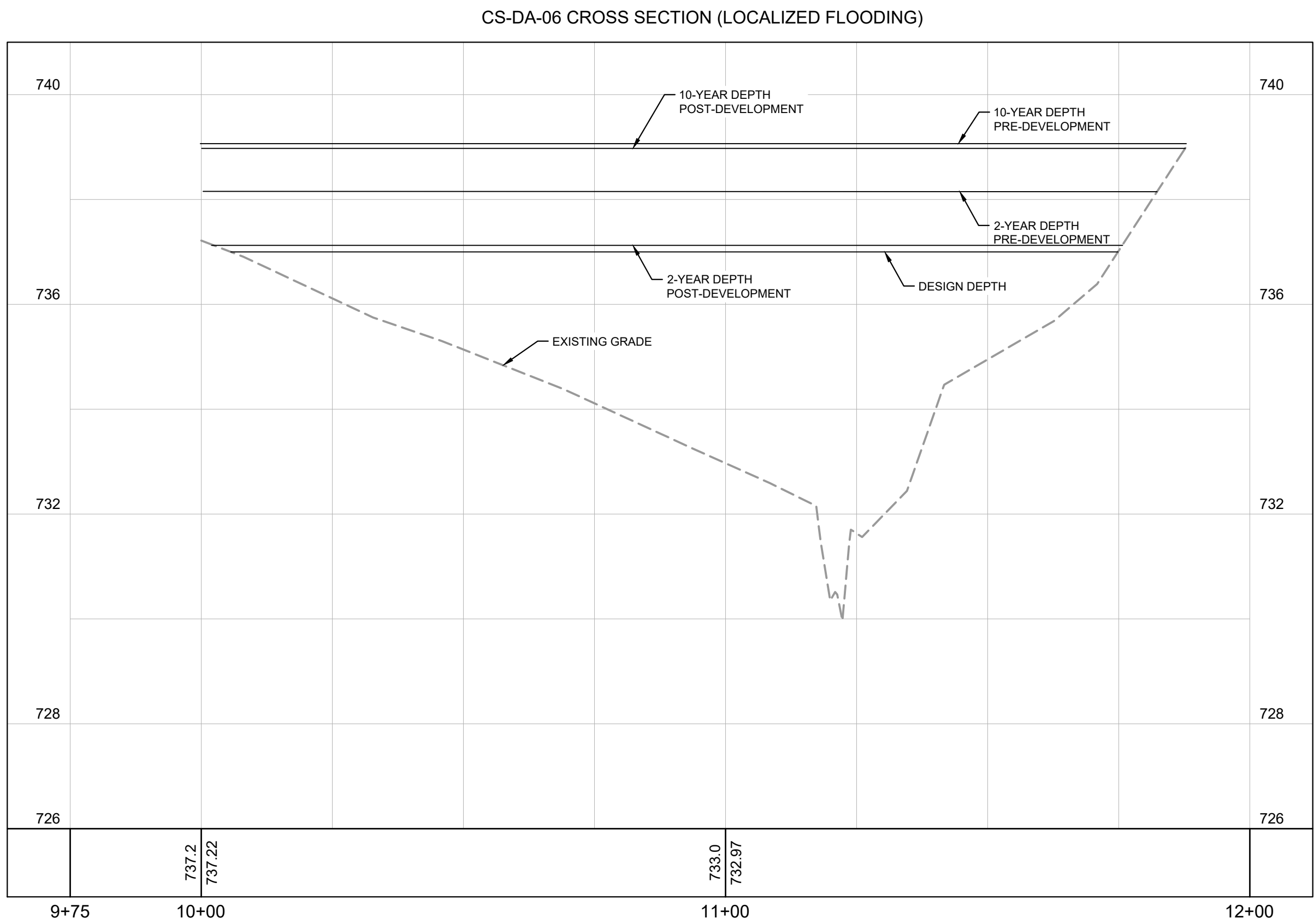
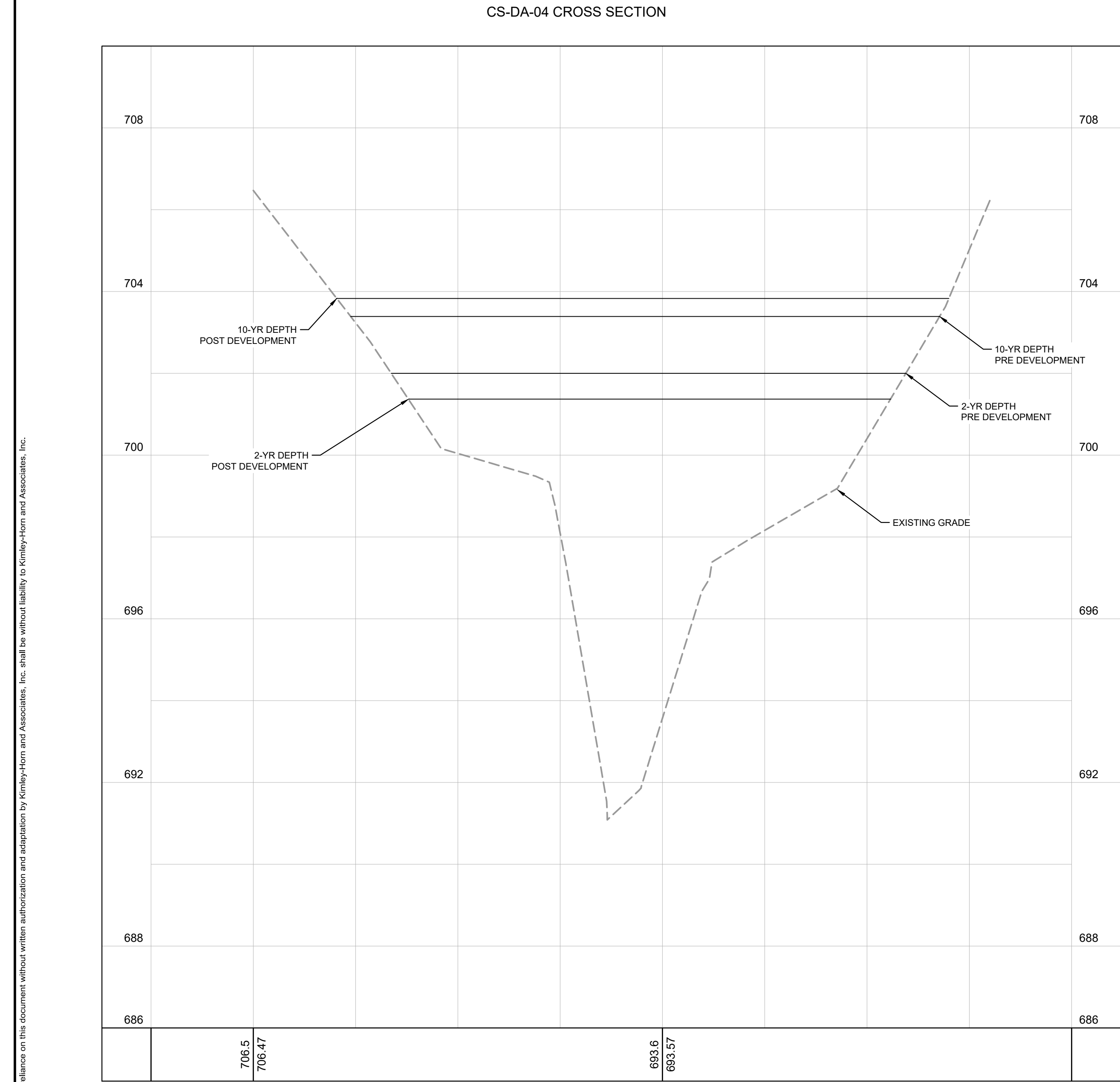
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Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CG-207 POST DEVELOPMENT DOWNTREAM ANALYSIS November 08, 2025 01:46:46pm
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PROJECT HERCULES	POST DEVELOPMENT DOWNTREAM ANALYSIS	VA
CG-207	APPOMATTOX COUNTY	DW
SHEET NUMBER	DESIGNED BY	CHECKED BY
CG-207	ECS	DW
DATE	SCALE	AS SHOWN
11/14/2025	1:1	AS SHOWN
KHA PROJECT	113708001	113708001
COMMONWEALTH OF VIRGINIA		
JOSH M MACDONALD		
PROFESSIONAL ENGINEER		
11/14/2025		
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PRE DEVELOPMENT DOWNSTREAM DITCH CALCULATIONS																				
DITCH SECTION ID	DRAINAGE AREA ACRES	APPROX. LENGTH FT	C VALUE	TIME OF CONC.		I ₂ IN/HR	I ₁₀ IN/HR	Q ₂ CFS	Q ₁₀ CFS	SLOPE FT/FT	MANNING'S N	BOTTOM WIDTH FT	SIDE SLOPES		DESIGN DEPTH FT	2-YR DEPTH FT	2-YR VELOCITY FT/S	10-YR DEPTH FT	Added On-Site Q ₂ CFS	Added On-Site Q ₁₀ CFS
				MIN	IN/HR								L FT/FT	R FT/FT						
CS-DA-04	103.64	4958	0.27	31.55	2.20	3.03	61.45	84.60	0.05	0.1	0.0	0.15	0.19	14.8	10.95	3.02	12.34			
CS-DA-05	15.23	2319	0.34	17.40	3.07	4.15	15.70	21.18	0.06	0.1	0.0	0.07	0.05	2.7	11.86	1.86	13.27			
CS-DA-06	21.36	1732	0.26	7.62	4.35	5.76	24.07	31.85	0.06	0.1	0.0	0.17	0.11	7.0	8.19	2.56	9.10			
CS-DA-15	273.24	4776	0.34	29.84	2.28	3.13	212.61	292.06	0.01	0.1	18.0	0.12	0.16	3.0	3.89	2.95	4.80			

POST DEVELOPMENT DOWNSTREAM DITCH CALCULATIONS																				
DITCH SECTION ID	DRAINAGE AREA ACRES	APPROX. LENGTH FT	C VALUE	TIME OF CONC.		I ₂ IN/HR	I ₁₀ IN/HR	Q ₂ CFS	Q ₁₀ CFS	SLOPE FT/FT	MANNING'S N	BOTTOM WIDTH FT	SIDE SLOPES		DESIGN DEPTH FT	2-YR DEPTH FT	2-YR VELOCITY FT/S	10-YR DEPTH FT	Added On-Site Q ₂ CFS	Added On-Site Q ₁₀ CFS
				MIN	IN/HR								L	R						
CS-DA-04	88.12	4821	0.27	32.13	2.18	3.00	52.45	92.86	0.05	0.1	0.0	0.15	0.19	14.8	10.32	2.90	12.78	1.50	22.68	
CS-DA-05	13.18	2319	0.34	30.43	2.25	3.09	10.20	14.02	0.06	0.1	0.0	0.07	0.05	2.7	10.06	1.68	11.33			
CS-DA-06	20.04	1883	0.29	20.43	2.83	3.83	16.84	31.03	0.06	0.1	0.0	0.17	0.11	7.0	7.16	2.34	9.01	0.37	8.70	
CS-DA-15	259.36	1713	0.34	29.84	2.28	3.13	204.64	309.99	0.01	0.1	18.0	0.12	0.16	3.0	3.79	2.92	4.99	1.84	31.41	

Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CG-208 DOWNSTREAM ANALYSIS CROSS SECTIONS November 06, 2025 01:47:20pm
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KHA PROJECT 113706001
DATE 11/14/2025
SCALE AS SHOWN
DESIGNED BY ECS
DRAWN BY ECS
CHECKED BY DW

DOWNSTREAM ANALYSIS CROSS SECTIONS

PROJECT HERCULES

APPOMATTOX COUNTY VA

SHEET NUMBER CG-208

Plotted By:McGray, Stephen Sheet Set:Kha Layout:CG-209 STORMWATER QUANTITY PLAN November 06, 2025 01:47:39pm
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STORMWATER QUANTITY NARRATIVE

THE ANALYSIS LIMITS FOR STORMWATER QUANTITY COMPLIANCE AT EACH POINT OF ANALYSIS (POA) IS DEFINED BY THE LIMITS OF DISTURBANCE, WITH THE EXCEPTION OF LINEAR TEMPORARY WORKSPACE IMPROVEMENTS SUCH AS PERIMETER FENCING AND UTILITIES. IN THESE INSTANCES, IF THE EXISTING LAND COVER IS PASTURE AND WILL BE CONVERTED TO MANAGED TURF AFTER THE PROPOSED IMPROVEMENTS, THE AREA IS EXCLUDED FROM THE ANALYSIS LIMITS. DRAINAGE AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE WHICH DRAIN TO A POA ARE INCLUDED WITHIN THE ANALYSIS LIMITS. LINEAR IMPROVEMENTS IN WHICH THE EXISTING LAND COVER IS FORESTED WILL BE CONVERTED TO BRUSH AFTER THE PROPOSED IMPROVEMENTS, SATISFYING SHEET FLOW REQUIREMENTS. THE DOWNSTREAM OFFSITE ANALYSIS TO THE LIMITS OF ANALYSIS FOR CHANNEL AND FLOOD PROTECTION FOR EACH POA IS PROVIDED IN **APPENDIX S**. THE TABLE TO THE RIGHT DEFINES THE WATER QUANTITY COMPLIANCE FOR EACH DRAINAGE AREA ON THE SITE AND THE COMPLIANCE METHODS DESCRIBED IN 9VAC25-875-600. DRAINAGE AREAS WITH "N/A" FOR CHANNEL AND FLOOD PROTECTION CRITERIA ARE REROUTED TO A DIFFERENT DRAINAGE AREA WITH THE PROPOSED IMPROVEMENTS.

POA WATER QUANTITY CALCULATIONS				
DA-01	Site Outfall Peak Flow Comparison, Q _{peak} (cfs)			
Compliance Method	For Channel Protection, the Energy Balance has been met per 9VAC25-870-600.B.3a. For flood protection, post development 10yr-24 hr peak flow rate has been kept below pre development, therefore 9VAC25-870-600.C.2.b. is satisfied.			
Permanent Feature?	No			
Storm Frequency (Years)	Pre-development On-site (cfs)	Pre-development Off-site (cfs)	Post-development Allowable (cfs)*	Post-development Actual (cfs)
1	1.51	0.00	N/A	0.00
10	8.94	0.00	8.94	0.00
*Calculated using Energy Balance Equation - offsite area is not included in the improvement factor calculation, but added in to generate the allowable flow				
Energy Balance Equation:	Q _{post allowable} = $\{I.F. \times (Q_{pre-on-site} \times V_{pre-on-site}) / V_{post-on-site}\} + Q_{pre-on-site}$			
V _{pre-on-site} =	0.135	AF		
V _{post-on-site} =	0.000	AF		From HydroCAD
I.F.=	0.8			0.8 for sites>1 acre

DA-03	Site Outfall Peak Flow Comparison, Q _{peak} (cfs)			
Compliance Method	For Channel Protection, the Energy Balance has been met per 9VAC25-870-600.B.3a. For flood protection, post development 10yr-24 hr peak flow rate has been kept below pre development, therefore 9VAC25-870-600.C.2.b. is satisfied.			
Permanent Feature?	No			
Storm Frequency (Years)	Pre-development On-site (cfs)	Pre-development Off-site (cfs)	Post-development Allowable (cfs)*	Post-development Actual (cfs)
1	2.79	0.00	N/A	0.00
10	13.75	0.00	13.75	0.00
*Calculated using Energy Balance Equation - offsite area is not included in the improvement factor calculation, but added in to generate the allowable flow				
Energy Balance Equation:	Q _{post allowable} = $\{I.F. \times (Q_{pre-on-site} \times V_{pre-on-site}) / V_{post-on-site}\} + Q_{pre-on-site}$			
V _{pre-on-site} =	0.155	AF		
V _{post-on-site} =	0.000	AF		From HydroCAD
I.F.=	0.8			0.8 for sites>1 acre

DA-05	Site Outfall Peak Flow Comparison, Q _{peak} (cfs)			
Compliance Method	For Channel Protection, the Energy Balance has been met per 9VAC25-870-600.B.3a. For flood protection, post development 10yr-24 hr peak flow rate has been kept below pre development, therefore 9VAC25-870-600.C.2.b. is satisfied.			
Permanent Feature?	No			
Storm Frequency (Years)	Pre-development On-site (cfs)	Pre-development Off-site (cfs)	Post-development Allowable (cfs)*	Post-development Actual (cfs)
1	3.41	6.49	10.10	7.01
10	12.65	19.20	31.85	20.63
*Calculated using Energy Balance Equation - offsite area is not included in the improvement factor calculation, but added in to generate the allowable flow				
Energy Balance Equation:	Q _{post allowable} = $\{I.F. \times (Q_{pre-on-site} \times V_{pre-on-site}) / V_{post-on-site}\} + Q_{pre-on-site}$			
V _{pre-on-site} =	0.213	AF		
V _{post-on-site} =	0.161	AF		From HydroCAD
I.F.=	0.8			0.8 for sites>1 acre

DA-07	Site Outfall Peak Flow Comparison, Q _{peak} (cfs)			
Compliance Method	For Channel Protection, the Energy Balance has been met per 9VAC25-870-600.B.3a. For flood protection, post development 10yr-24 hr peak flow rate has been kept below pre development, therefore 9VAC25-870-600.C.2.b. is satisfied.			
Permanent Feature?	No			
Storm Frequency (Years)	Pre-development On-site (cfs)	Pre-development Off-site (cfs)	Post-development Allowable (cfs)*	Post-development Actual (cfs)
1	0.42	0.00	N/A	0.00
10	4.07	0.00	4.07	0.00
*Calculated using Energy Balance Equation - offsite area is not included in the improvement factor calculation, but added in to generate the allowable flow				
Energy Balance Equation:	Q _{post allowable} = $\{I.F. \times (Q_{pre-on-site} \times V_{pre-on-site}) / V_{post-on-site}\} + Q_{pre-on-site}$			
V _{pre-on-site} =	0.063	AF		
V _{post-on-site} =	0.000	AF		From HydroCAD
I.F.=	0.8			0.8 for sites>1 acre

DA-02	Site Outfall Peak Flow Comparison, Q _{peak} (cfs)			
Compliance Method	For Channel Protection, the Energy Balance has been met per 9VAC25-870-600.B.3a. For flood protection, post development 10yr-24 hr peak flow rate has been kept below pre development, therefore 9VAC25-870-600.C.2.b. is satisfied.			
Permanent Feature?	No			
Storm Frequency (Years)	Pre-development On-site (cfs)	Pre-development Off-site (cfs)	Post-development Allowable (cfs)*	Post-development Actual (cfs)
1	0.98	0.00	N/A	0.00
10	5.41	0.00	5.41	0.00
*Calculated using Energy Balance Equation - offsite area is not included in the improvement factor calculation, but added in to generate the allowable flow				
Energy Balance Equation:	Q _{post allowable} = $\{I.F. \times (Q_{pre-on-site} \times V_{pre-on-site}) / V_{post-on-site}\} + Q_{pre-on-site}$			
V _{pre-on-site} =	0.064	AF		
V _{post-on-site} =	0.000	AF		From HydroCAD
I.F.=	0.8			0.8 for sites>1 acre

DA-04	Site Outfall Peak Flow Comparison, Q _{peak} (cfs)			
Compliance Method	For Channel Protection, the Energy Balance has been met per 9VAC25-870-600.B.3a. For flood protection, post development 10yr-24 hr peak flow rate has been kept below pre development, therefore 9VAC25-870-600.C.2.b. is satisfied.			
Permanent Feature?	Yes, routed through permanent pond WET POND A			
Storm Frequency (Years)	Pre-development On-site (cfs)	Pre-development Off-site (cfs)	Post-development Allowable (cfs)*	Post-development Actual (cfs)
1	3.85	0.00	0.32	0.32
10	23.32	0.00	23.32	22.68
*Calculated using Energy Balance Equation - offsite area is not included in the improvement factor calculation, but added in to generate the allowable flow				
Energy Balance Equation:	Q _{post allowable} = $\{I.F. \times (Q_{pre-on-site} \times V_{pre-on-site}) / V_{post-on-site}\} + Q_{pre-on-site}$			
V _{pre-on-site} =	0.380	AF		From HydroCAD
V _{post-on-site} =	3.695	AF		From HydroCAD
I.F.=	0.8			0.8 for sites>1 acre

DA-06	Site Outfall Peak Flow Comparison, Q _{peak} (cfs)			
Compliance Method	For Channel Protection, the Energy Balance has been met per 9VAC25-870-600.B.3a. For flood protection, post development 10yr-24 hr peak flow rate has been kept below pre development, therefore 9VAC25-870-600.C.2.b. is satisfied.			
Permanent Feature?	Yes, routed through permanent pond WET POND B			
Storm Frequency (Years)	Pre-development On-site (cfs)	Pre-development Off-site (cfs)	Post-development Allowable (cfs)*	Post-development Actual (cfs)
1	0.29	1.88	1.91	1.91
10	5.92	9.98	15.90	15.14
*Calculated using Energy Balance Equation - offsite area is not included in the improvement factor calculation, but added in to generate the allowable flow				
Energy Balance Equation:	Q _{post allowable} = $\{I.F. \times (Q_{pre-on-site} \times V_{pre-on-site}) / V_{post-on-site}\} + Q_{pre-on-site}$			
V _{pre-on-site} =	0.086	AF		
V _{post-on-site} =	0.756	AF		From HydroCAD
I.F.=	0.8			0.8 for sites>1 acre

DA-08	Site Outfall Peak Flow Comparison, Q _{peak} (cfs)			
Compliance Method	For Channel Protection, the Energy Balance has been met per 9VAC25-870-600.B.3a. For flood protection, post development 10yr-24 hr peak flow rate has been kept below pre development, therefore 9VAC25-870-600.C.2.b. is satisfied.			
Permanent Feature?	No			
Storm Frequency (Years)	Pre-development On-site (cfs)	Pre-development Off-site (cfs)	Post-development Allowable (cfs)*	Post-development Actual (cfs)
1	0.01	0.00	N/A	0.00
10	0.08	0.00	0.08	0.00
*Calculated using Energy Balance Equation - offsite area is not included in the improvement factor calculation, but added in to generate the allowable flow				
Energy Balance Equation:	Q _{post allowable} = $\{I.F. \times (Q_{pre-on-site} \times V_{pre-on-site}) / V_{post-on-site}\} + Q_{pre-on-site}$			
V _{pre-on-site} =	0.001	AF		
V _{post-on-site} =	0.000	AF		From HydroCAD
I.F.=	0.8			0.8 for sites>1 acre

DRAINAGE AREA COMPLIANCE METHOD SUMMARY							
DRAINAGE AREA LABEL	CHANNEL PROTECTION		FLOOD PROTECTION			SHEET FLOW	ADEQUATE OUTFALL
	9VAC25-875-600.B.1.a	9VAC25-875-600.B.3.a	9VAC25-875-600.C.1	9VAC25-875-600.C.2.b	9VAC25-875-600.C.3.c	9VAC25-875-600.D	
DA-01	N/A	N/A	N/A	N/A	N/A		N/A
DA-02	N/A	N/A	N/A	N/A	N/A		N/A
DA-03	N/A	N/A	N/A	N/A	N/A		N/A
DA-04		X	X		X		Stream/Wetland
DA-05		X		X			Stream/Wetland
DA-06		X		X			Stream/Wetland
DA-07	N/A	N/A	N/A	N/A	N/A		N/A
DA-08	N/A	N/A	N/A	N/A	N/A		N/A
DA-09	N/A	N/A	N/A	N/A	N/A		N/A
DA-10	N/A	N/A	N/A	N/A	N/A		N/A
DA-11	N/A	N/A	N/A	N/A	N/A		N/A
DA-12	N/A	N/A	N/A	N/A	N/A		N/A
DA-13	N/A	N/A	N/A	N/A	N/A		N/A
DA-14	N/A	N/A	N/A	N/A	N/A		N/A
DA-15		X		X			Stream/Wetland
FENCE-01						X	Stream/Wetland
FENCE-02						X	Stream/Wetland
FENCE-03						X	Stream/Wetland
FENCE-04						X	Stream/Wetland
FENCE-05						X	Stream/Wetland
TEMP-01 THROUGH TEMP-08	TEMPORARY WORKSPACE ONLY						
**NOTE: DRAINAGE AREAS WITH "N/A" FOR CHANNEL AND FLOOD PROTECTION CRITERIA ARE REROUTED TO A DIFFERENT DRAINAGE AREA WITH THE PROPOSED IMPROVEMENTS							

DA-09	Site Outfall Peak Flow Comparison, Q _{peak} (cfs)			
Compliance Method	For Channel Protection, the Energy Balance has been met per 9VAC25-870-600.B.3a. For flood protection, post development 10yr-24 hr peak flow rate has been kept below pre development, therefore 9VAC25-870-600.C.2.b. is satisfied.			
Permanent Feature?	No			
Storm Frequency (Years)	Pre-development On-site (cfs)	Pre-development Off-site (cfs)	Post-development Allowable (cfs)*	Post-development Actual (cfs)
1	0.33	0.00	N/A	0.00
10	2.37	0.00	2.37	0.00
*Calculated using Energy Balance Equation - offsite area is not included in the improvement factor calculation, but added in to generate the allowable flow				
Energy Balance Equation:	Q _{post allowable} = $\{I.F. \times (Q_{pre-on-site} \times V_{pre-on-site}) / V_{post-on-site}\} + Q_{pre-on-site}$			
V _{pre-on-site} =	0.033	AF		
V _{post-on-site} =	0.000	AF		From HydroCAD
I.F.=	0.8			0.8 for sites>1 acre

DA-11	Site Outfall Peak Flow Comparison, Q _{peak} (cfs)			
Compliance Method	For Channel Protection, the Energy Balance has been met per 9VAC25-870-600.B.3a. For flood protection, post development 10yr-24 hr peak flow rate has been kept below pre development, therefore 9VAC25-870-600.C.2.b. is satisfied.			
Permanent Feature?	No			
Storm Frequency (Years)	Pre-development On-site (cfs)	Pre-development Off-site (cfs)	Post-development Allowable (cfs)*	Post-development Actual (cfs)
1	2.26	0.00	N/A	0.00
10	14.66	0.00	14.66	0.00
*Calculated using Energy Balance Equation - offsite area is not included in the improvement factor calculation, but added in to generate the allowable flow				
Energy Balance Equation:	Q _{post allowable} = $\{I.F. \times (Q_{pre-on-site} \times V_{pre-on-site}) / V_{post-on-site}\} + Q_{pre-on-site}$			
V _{pre-on-site} =	0.217	AF		
V _{post-on-site} =	0.000	AF		From HydroCAD
I.F.=	0.8			0.8 for sites>1 acre

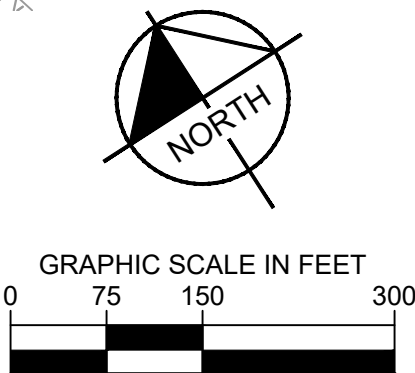
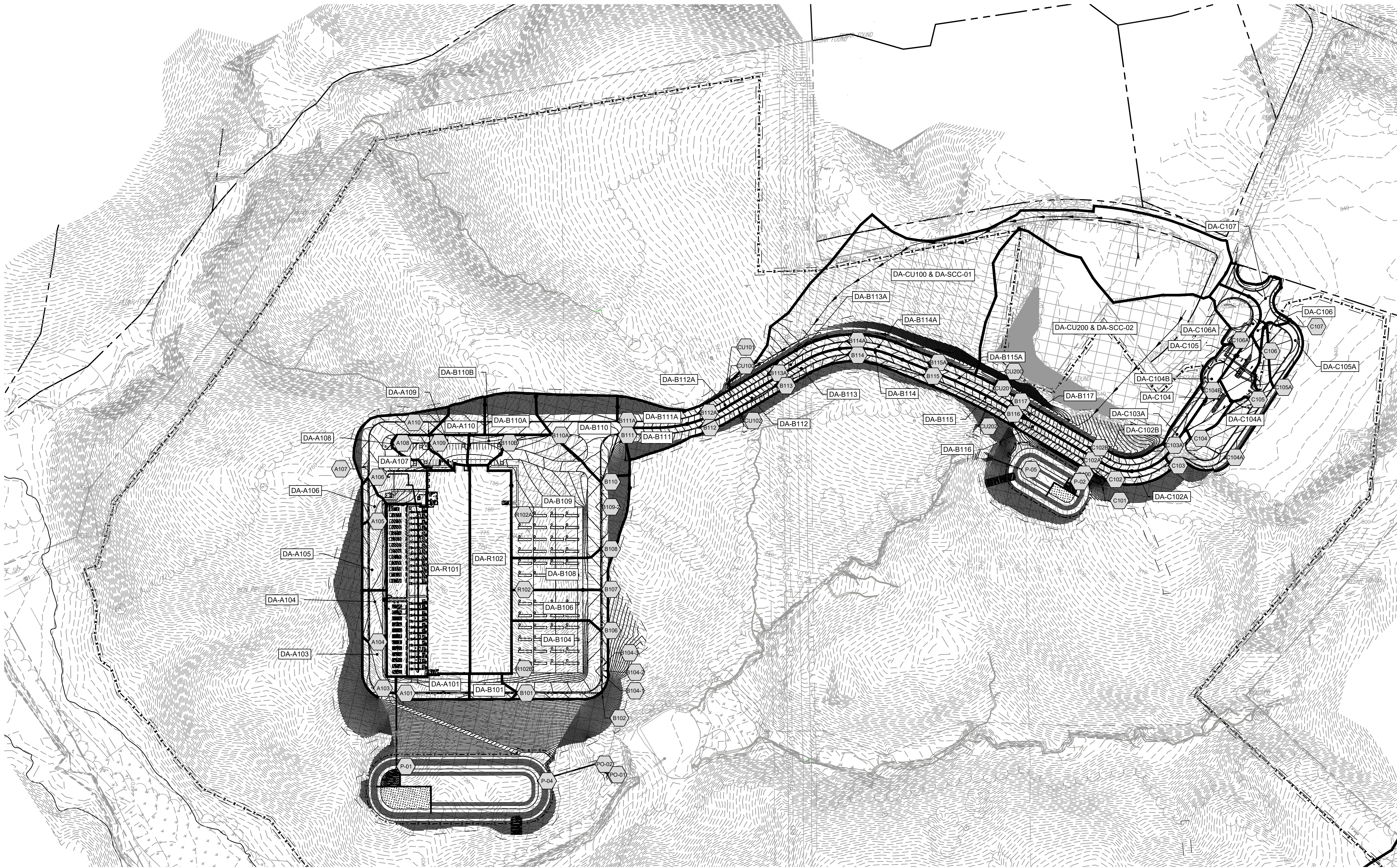
DA-13	Site Outfall Peak Flow Comparison, Q _{peak} (cfs)			
Compliance Method	For Channel Protection, the Energy Balance has been met per 9VAC25-870-600.B.3a. For flood protection, post development 10yr-24 hr peak flow rate has been kept below pre development, therefore 9VAC25-870-600.C.2.b. is satisfied.			
Permanent Feature?	No			
Storm Frequency (Years)	Pre-development On-site (cfs)	Pre-development Off-site (cfs)	Post-development Allowable (cfs)*	Post-development Actual (cfs)
1	4.01	0.00	N/A	0.00
10	15.78	0.00	15.78	0.00
*Calculated using Energy Balance Equation - offsite area is not included in the improvement factor calculation, but added in to generate the allowable flow				
Energy Balance Equation:	Q _{post allowable} = $\{I.F. \times (Q_{pre-on-site} \times V_{pre-on-site}) / V_{post-on-site}\} + Q_{pre-on-site}$			
V _{pre-on-site} =	0.272	AF		
V _{post-on-site} =	0.000	AF		From HydroCAD
I.F.=	0.8			0.8 for sites>1 acre

DA-15	Site Outfall Peak Flow Comparison, Q _{peak} (cfs)			
Compliance Method	For Channel Protection, the Energy Balance has been met per 9VAC25-870-600.B.3a. For flood protection, post development 10yr-24 hr peak flow rate has been kept below pre development, therefore 9VAC25-870-600.C.2.b. is satisfied.			
Permanent Feature?	Yes, routed through permanent pond WET POND C			
Storm Frequency (Years)	Pre-development On-site (cfs)	Pre-development Off-site (cfs)	Post-development Allowable (cfs)*	Post-development Actual (cfs)
1	4.17	1.48	1.83	1.80
10	24.31	12.34	36.65	33.93
*Calculated using Energy Balance Equation - offsite area is not included in the improvement factor calculation, but added in to generate the allowable flow				
Energy Balance Equation:	Q _{post allowable} = $\{I.F. \times (Q_{pre-on-site} \times V_{pre-on-site}) / V_{post-on-site}\} + Q_{pre-on-site}$			
V _{pre-on-site} =	0.344	AF		
V _{post-on-site} =	3.322	AF		From HydroCAD
I.F.=	0.8			0.8 for sites>1 acre

DA-10	Site Outfall Peak Flow Comparison, Q _{peak} (cfs)			
Compliance Method	For Channel Protection, the Energy Balance has been met per 9VAC25-870-600.B.3a. For flood protection, post development 10yr-24 hr peak flow rate has been kept below pre development, therefore 9VAC25-870-600.C.2.b. is satisfied.			
Permanent Feature?	No			
Storm Frequency (Years)	Pre-development On-site (cfs)	Pre-development Off-site (cfs)	Post-development Allowable (cfs)*	Post-development Actual (cfs)
1	0.51	0.00	N/A	0.00
10	3.89	0.00	3.89	0.00
*Calculated using Energy Balance Equation - offsite area is not included in the improvement factor calculation, but added in to generate the allowable flow				
Energy Balance Equation:	Q _{post allowable} = $\{I.F. \times (Q_{pre-on-site} \times V_{pre-on-site}) / V_{post-on-site}\} + Q_{pre-on-site}$			
V _{pre-on-site} =	0.044	AF		
V _{post-on-site} =	0.000	AF		From HydroCAD
I.F.=	0.8			0.8 for sites>1 acre

DA-12	Site Outfall Peak Flow Comparison, Q _{peak} (cfs)			
Compliance Method	For Channel Protection, the Energy Balance has been met per 9VAC25-870-600.B.3a. For flood protection, post development 10yr-24 hr peak flow rate has been kept below pre development, therefore 9VAC25-870-600.C.2.b. is satisfied.			
Permanent Feature?	No			
Storm Frequency (Years)	Pre-development On-site (cfs)	Pre-development Off-site (cfs)	Post-development Allowable (cfs)*	Post-development Actual (cfs)
1	1.68	0.00	N/A	0.00
10	5.61	0.00	5.61	0.00
*Calculated using Energy Balance Equation - offsite area is not included in the improvement factor calculation, but added in to generate the allowable flow				
Energy Balance Equation:	Q _{post allowable} = $\{I.F. \times (Q_{pre-on-site} \times V_{pre-on-site}) / V_{post-on-site}\} + Q_{pre-on-site}$			

Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CG-210 DRAINAGE AREA MAP November 05, 2025 04:42:08pm
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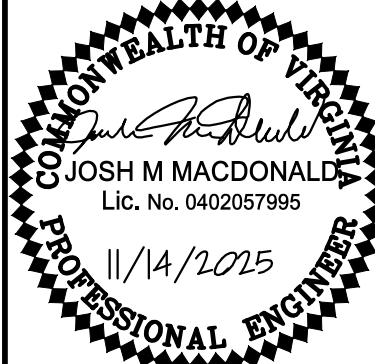


LAND COVER LEGEND	
	FORESTED COVER
	IMPERVIOUS COVER
	MANAGED TURF
	DRAINAGE AREA CALL OUT
	DRAINAGE AREA BOUNDARY

PROJECT HERCULES

DRAINAGE AREA MAP

KHA PROJECT	113706001
DATE	11/14/2025
SCALE	AS SHOWN
DESIGNED BY	STM
DRAWN BY	STM
CHECKED BY	JMM



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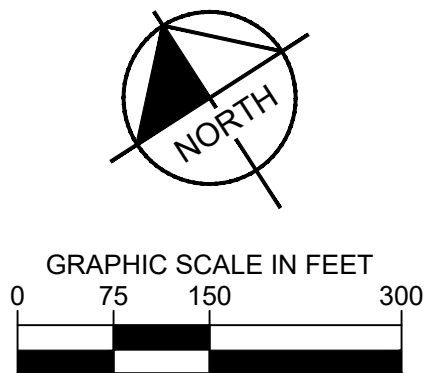
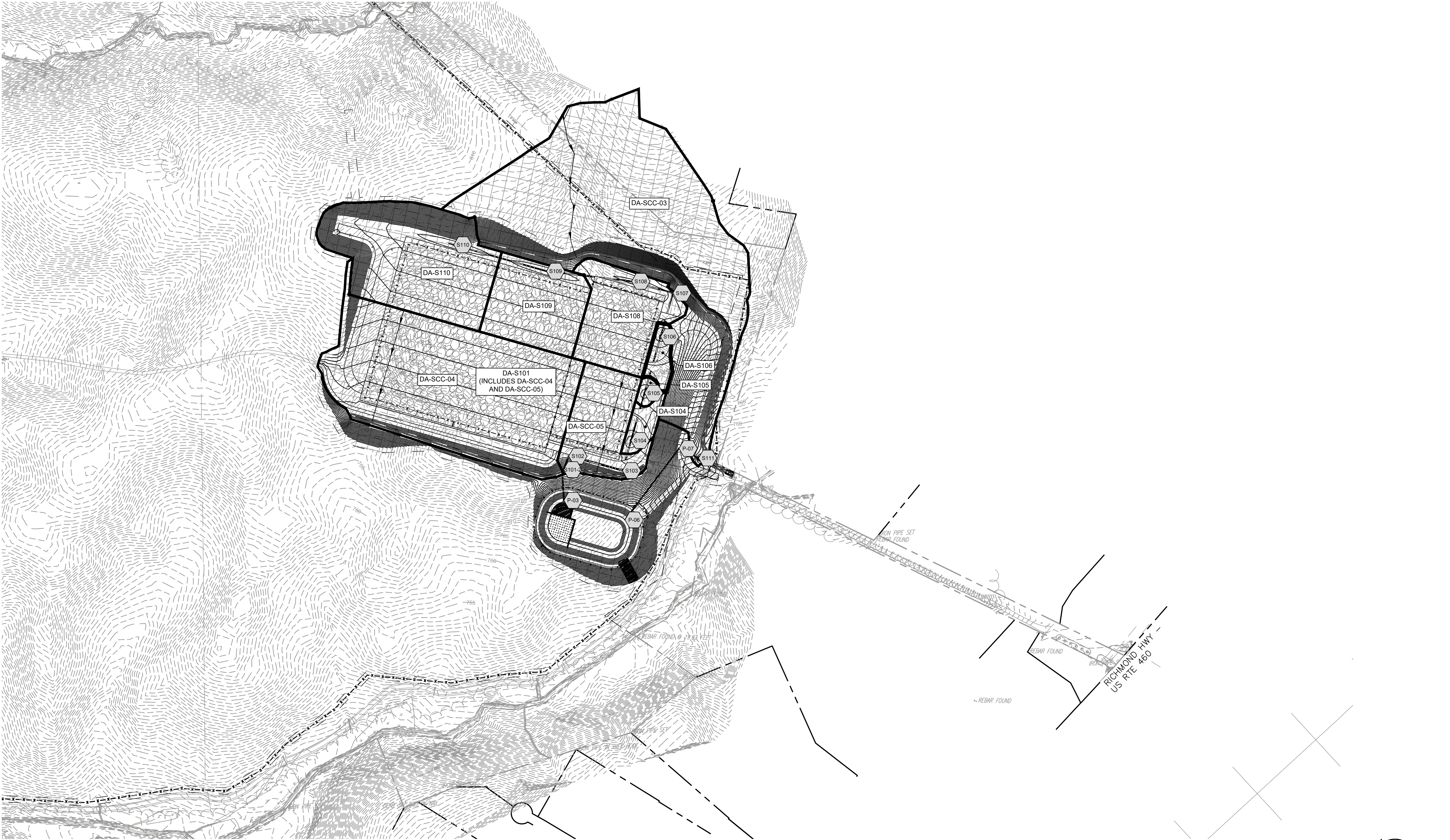
Jacobs

SHEET NUMBER
CG-210

APPOMATTOX COUNTY

VA

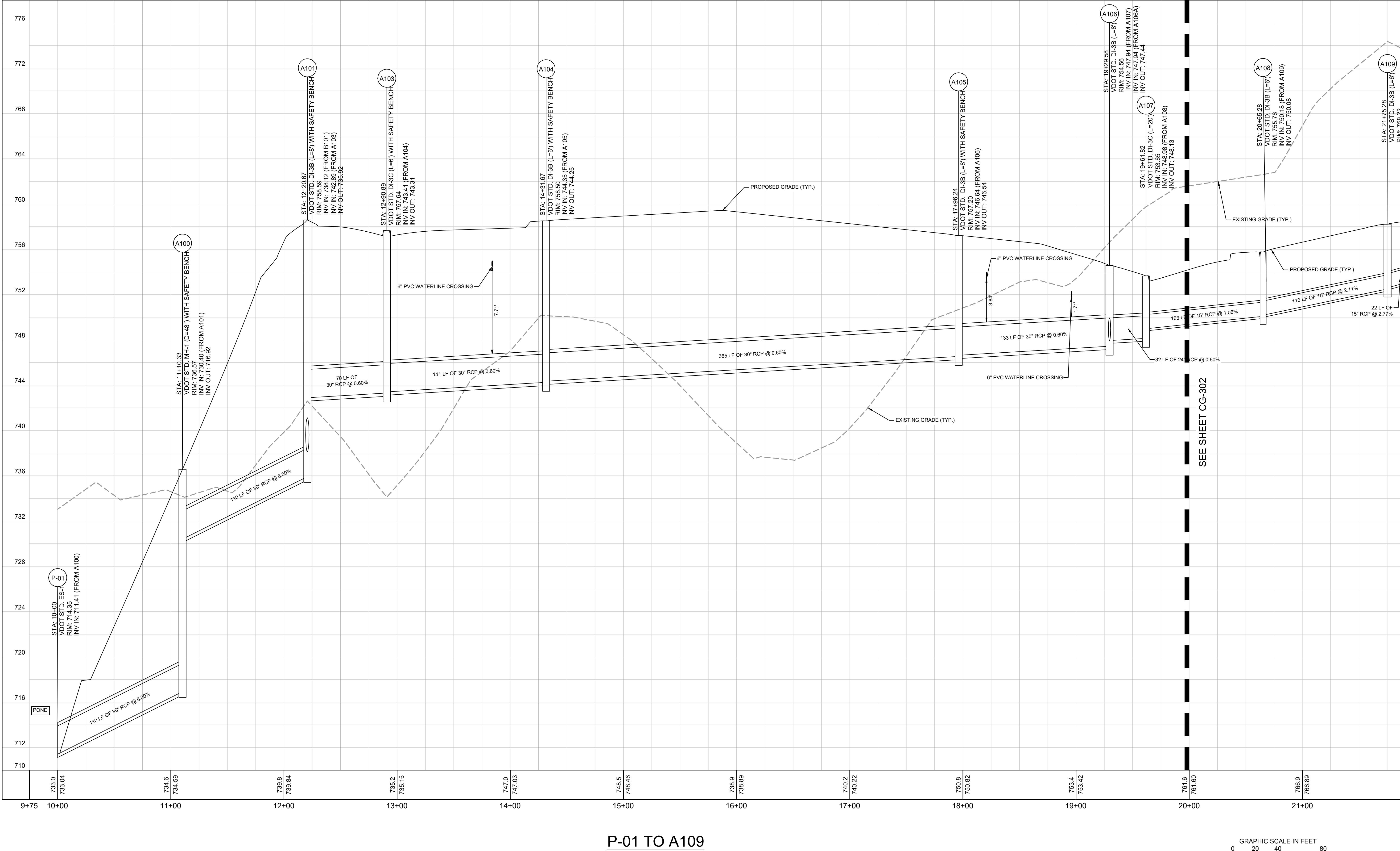
Plotted By:McGray, Stephen Sheet Set:Kha Layout:CG-211 DRAINAGE AREA MAP November 05, 2025 04:42:23pm
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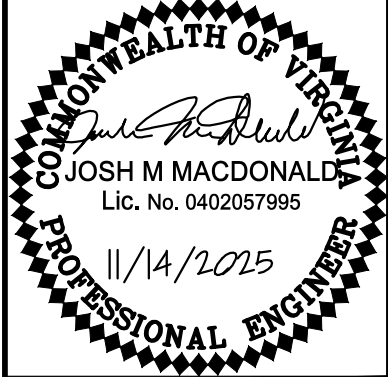
LAND COVER LEGEND	
	FORESTED COVER
	IMPERVIOUS COVER
	MANAGED TURF
	DRAINAGE AREA CALL OUT
	DRAINAGE AREA BOUNDARY

PROJECT HERCULES	DRAINAGE AREA MAP													
APPOMATTOX COUNTY	VA													
SHEET NUMBER CG-211														
<table><tr><td>KHA PROJECT</td><td>113706001</td></tr><tr><td>DATE</td><td>11/14/2025</td></tr><tr><td>SCALE</td><td>AS SHOWN</td></tr><tr><td>DESIGNED BY</td><td>STM</td></tr><tr><td>DRAWN BY</td><td>STM</td></tr><tr><td>CHECKED BY</td><td>JMM</td></tr></table>			KHA PROJECT	113706001	DATE	11/14/2025	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
KHA PROJECT	113706001													
DATE	11/14/2025													
SCALE	AS SHOWN													
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Plotted By:McGraw, Stephen Sheet Set:Kha Layout:CG-301 STORMWATER PROFILES November 05, 2025 04:42:50pm
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P-01 TO A109



KHA PROJECT	113706001
DATE	11/14/2025
SCALE	AS SHOWN
DESIGNED BY	STM
DRAWN BY	STM
CHECKED BY	JMM

STORMWATER
PROFILES

PROJECT HERCULES

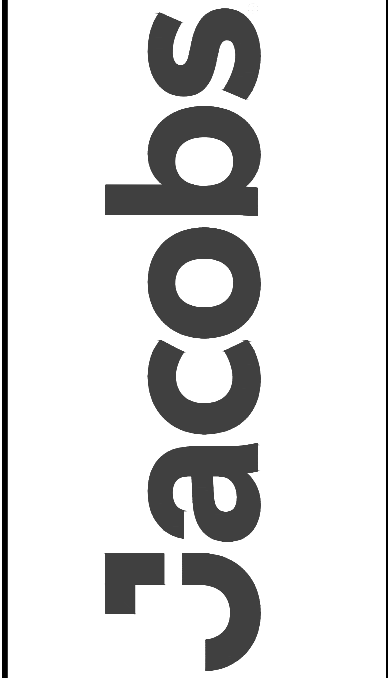
APPOMATTOX COUNTY

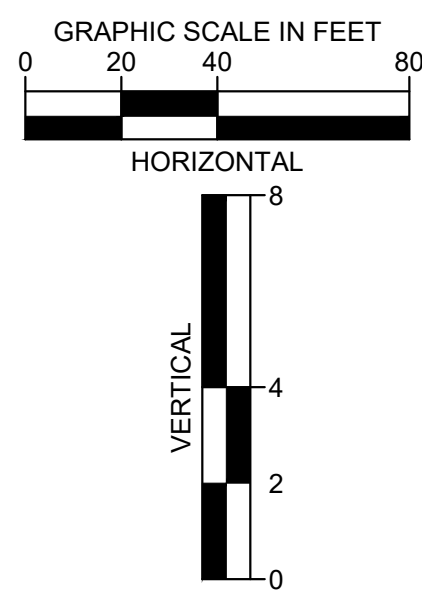
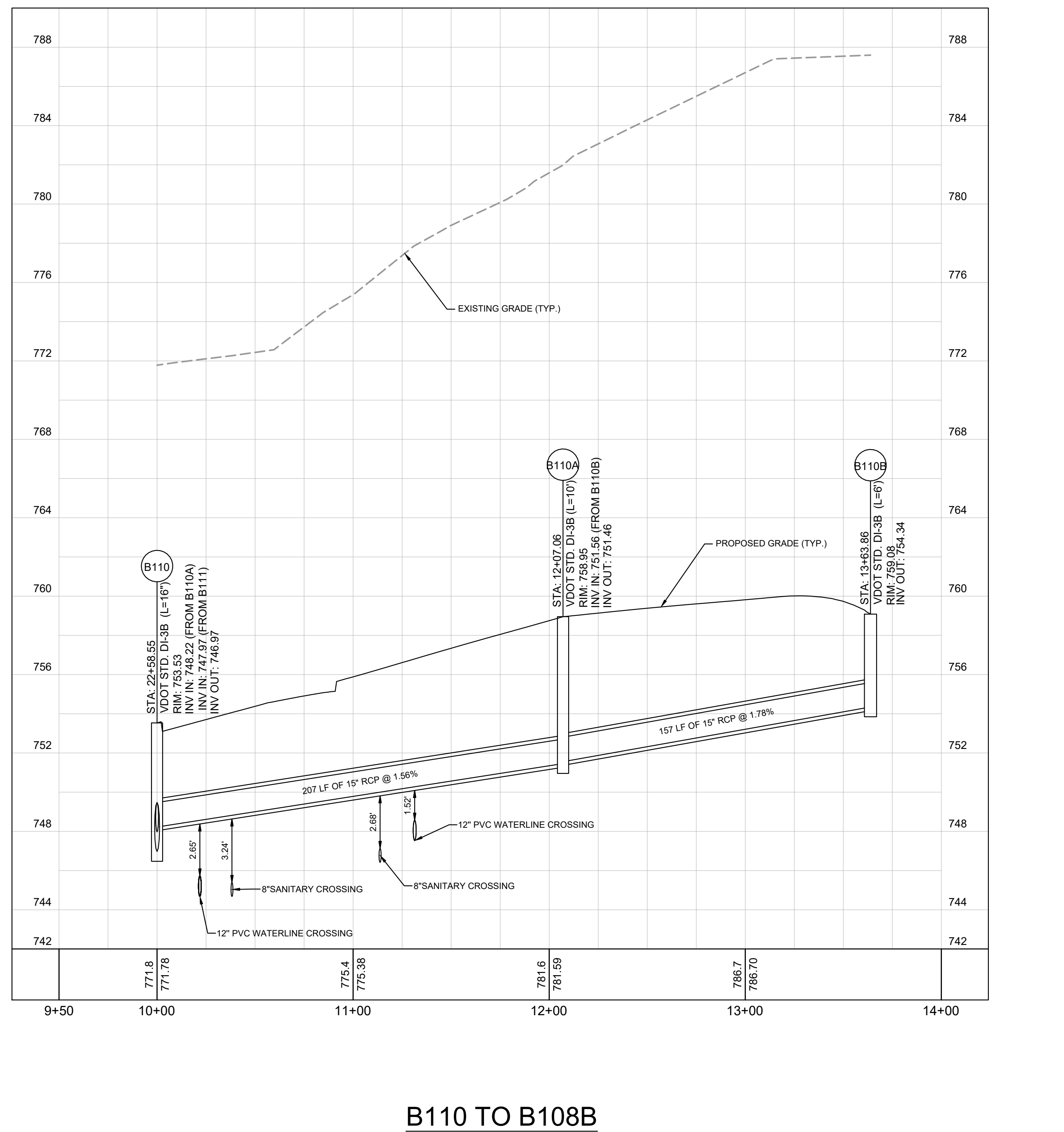
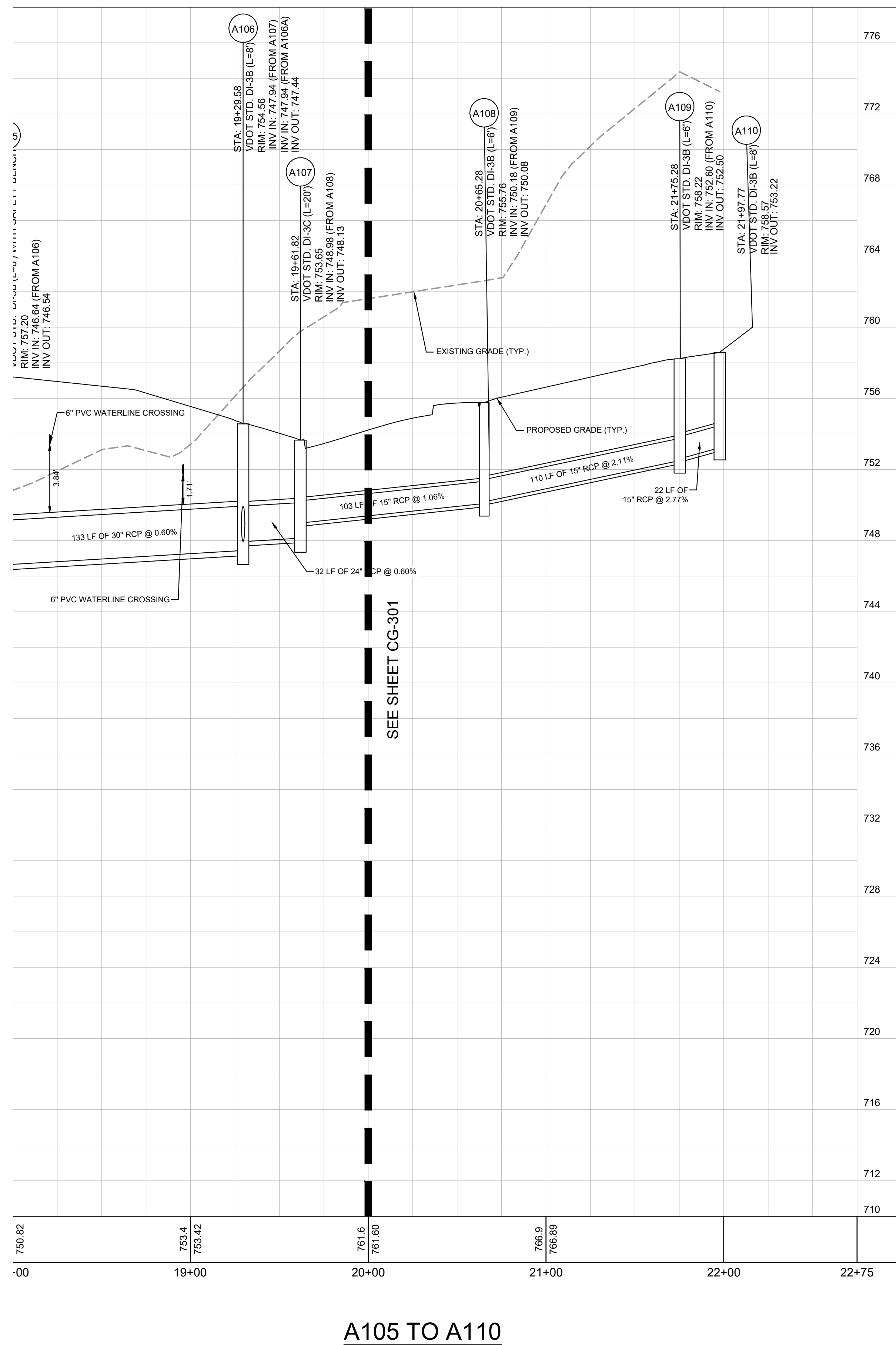
VA

SHEET NUMBER
CG-301

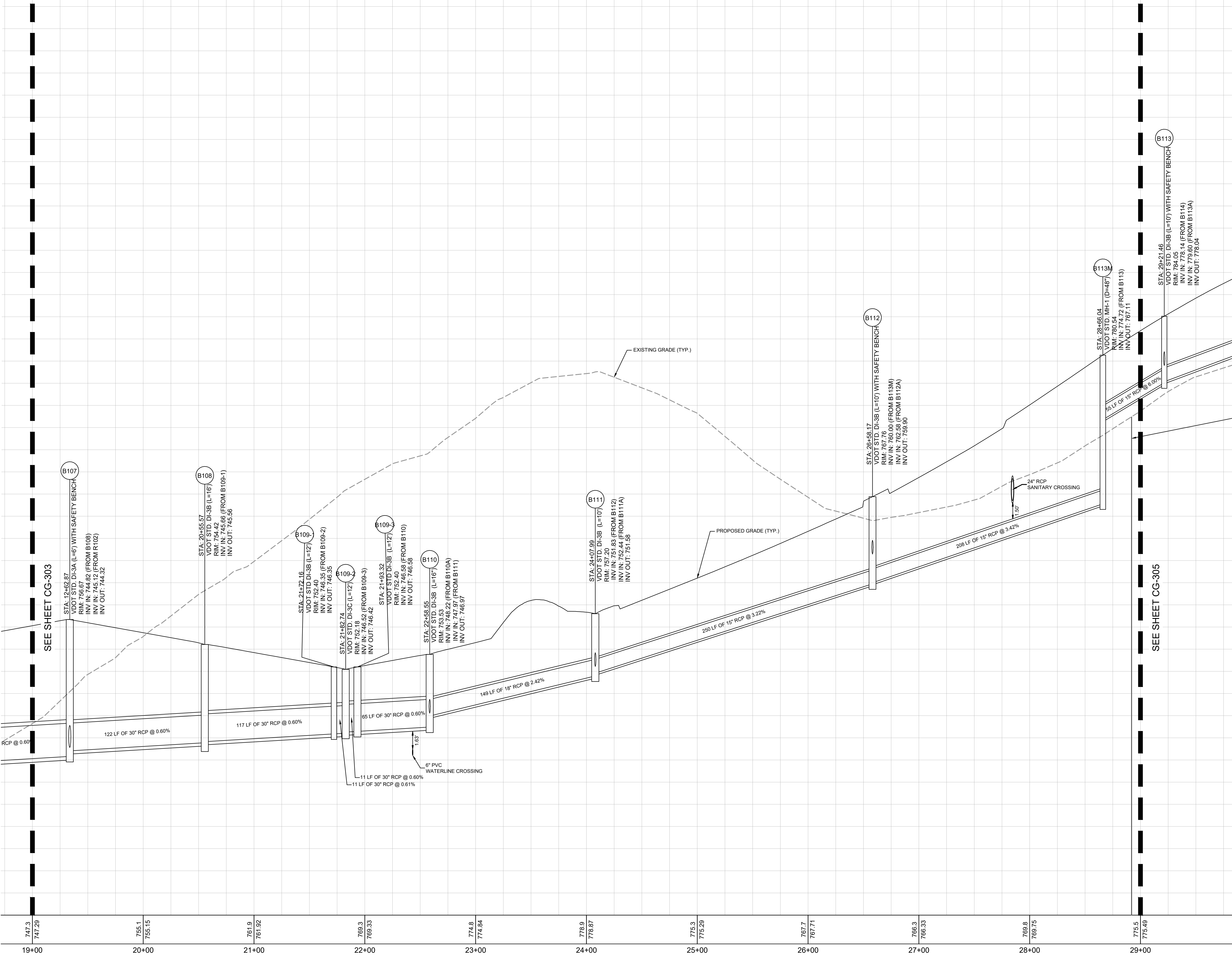
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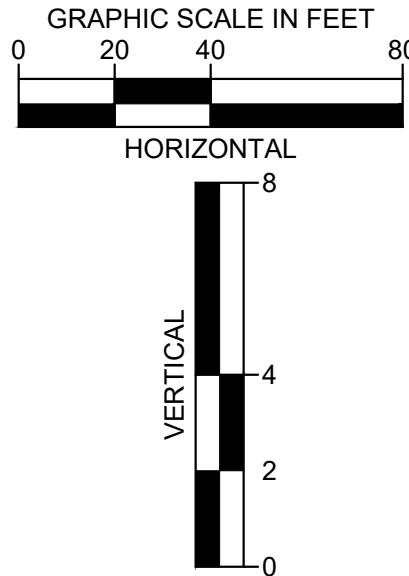




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B107 TO B113



PROJECT HERCULES

APPOMATTOX COUNTY

VA

STORMWATER PROFILES

CG-304

KHA PROJECT

113700001

DATE

11/14/2025

SCALE

AS SHOWN

DESIGNED BY

STM

DRAWN BY

STM

CHECKED BY

JMM

COMMONWEALTH OF VIRGINIA

JOSH M MACDONALD

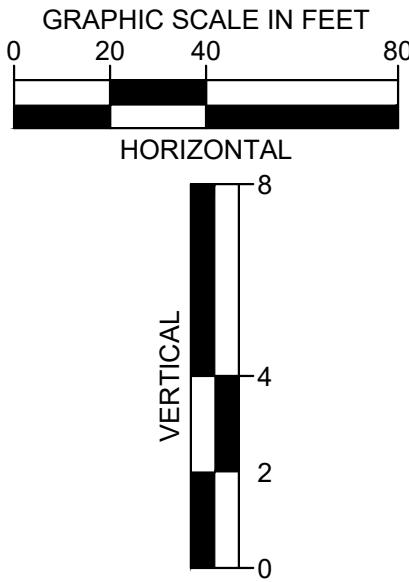
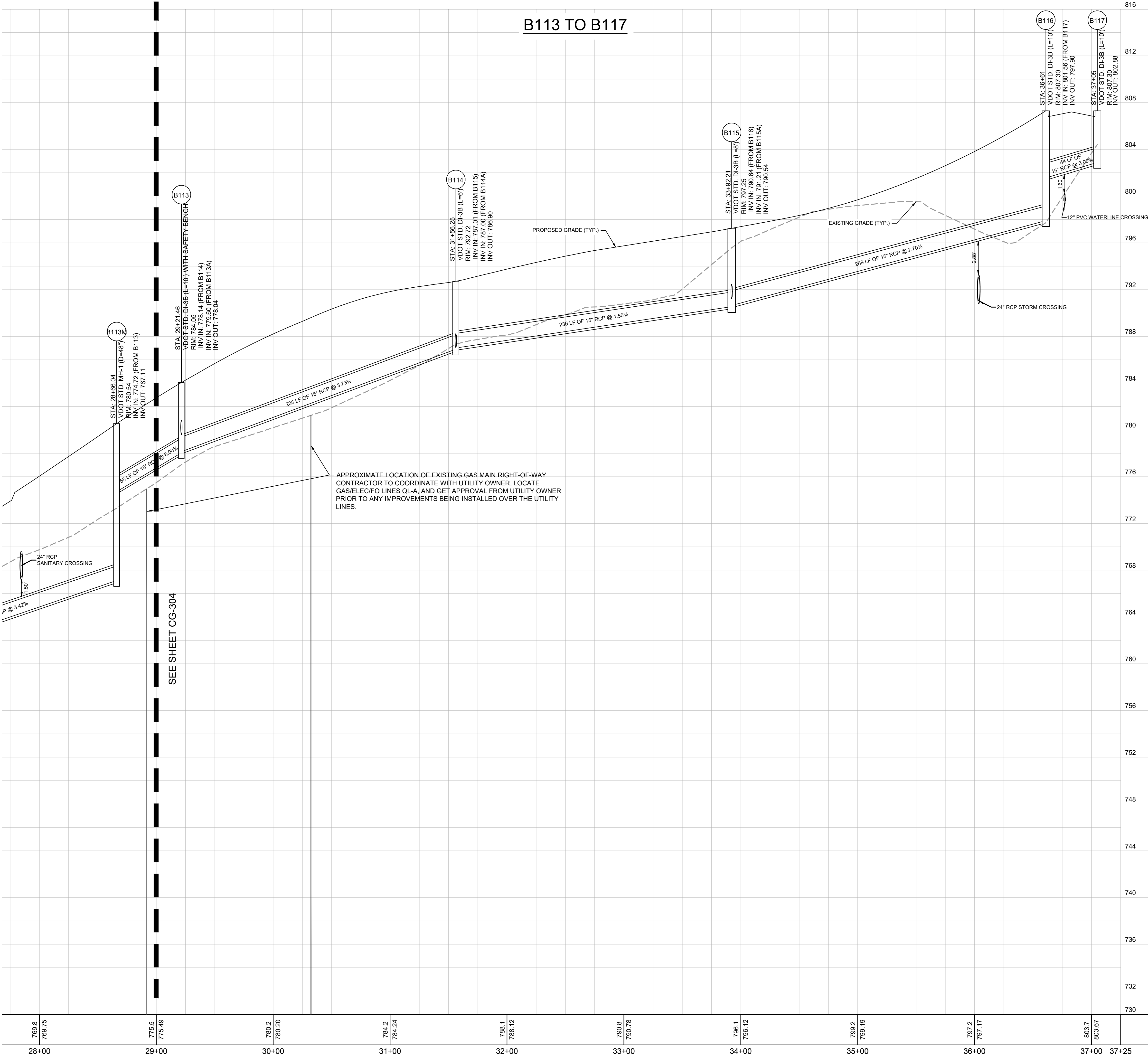
PROFESSIONAL ENGINEER

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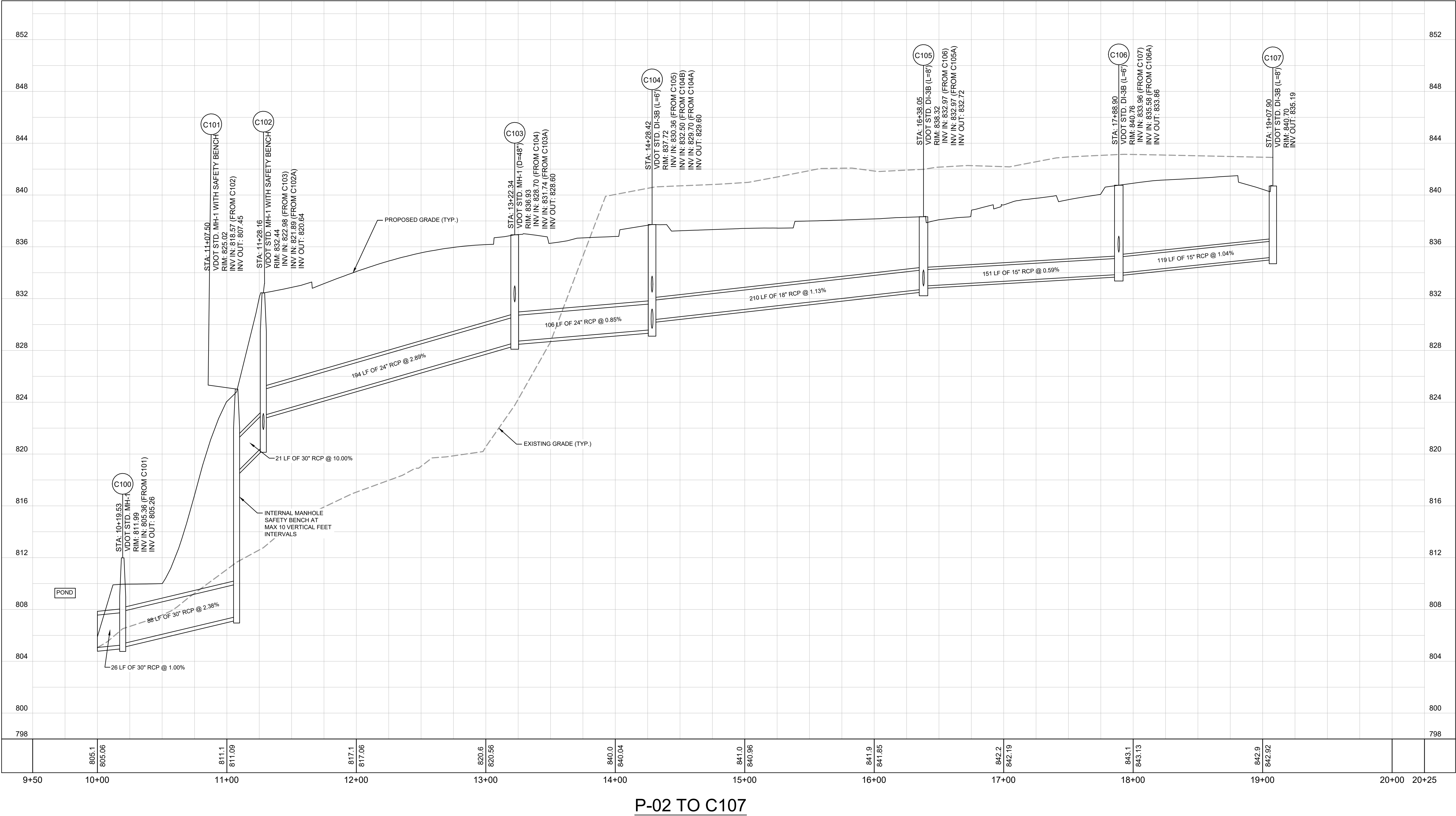
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SHEET NUMBER CG-305		APPOMATTOX COUNTY		VA		© 2025 KIMLEY-HORN AND ASSOCIATES, INC. 6806 PARAGON PLACE, SUITE 310, RICHMOND, VA 23230 PHONE: 804-673-3882 WWW.KIMLEY-HORN.COM		KIMLEY-HORN		© 2025 KIMLEY-HORN AND ASSOCIATES, INC. 6806 PARAGON PLACE, SUITE 310, RICHMOND, VA 23230 PHONE: 804-673-3882 WWW.KIMLEY-HORN.COM		COMMONWEALTH OF VIRGINIA JOSH M MACDONALD Lic. No. 0402057995 11/14/2025 PROFESSIONAL ENGINEER		JACOBS	

Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CG-306 November 05, 2025 04:43:20pm
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PROJECT HERCULES

CG-306

APPOMATTOX COUNTY

VA

STORMWATER PROFILES

KHA PROJECT	113706001
DATE	11/14/2025
SCALE	AS SHOWN
DESIGNED BY	STM
DRAWN BY	STM
CHECKED BY	JMM

COMMONWEALTH OF VIRGINIA

JOSH M MACDONALD

11/14/2025

PROFESSIONAL ENGINEER

Lic. No. 0402057995

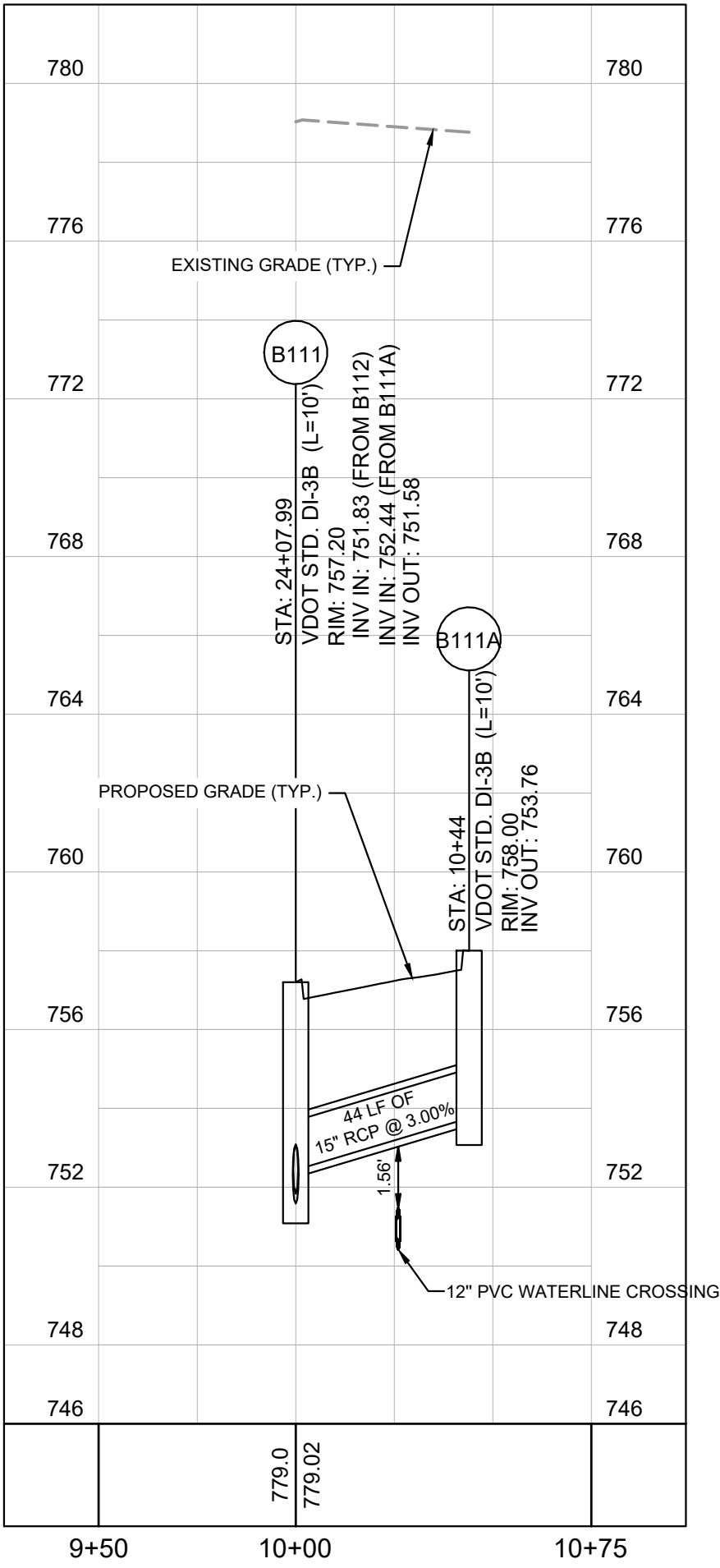
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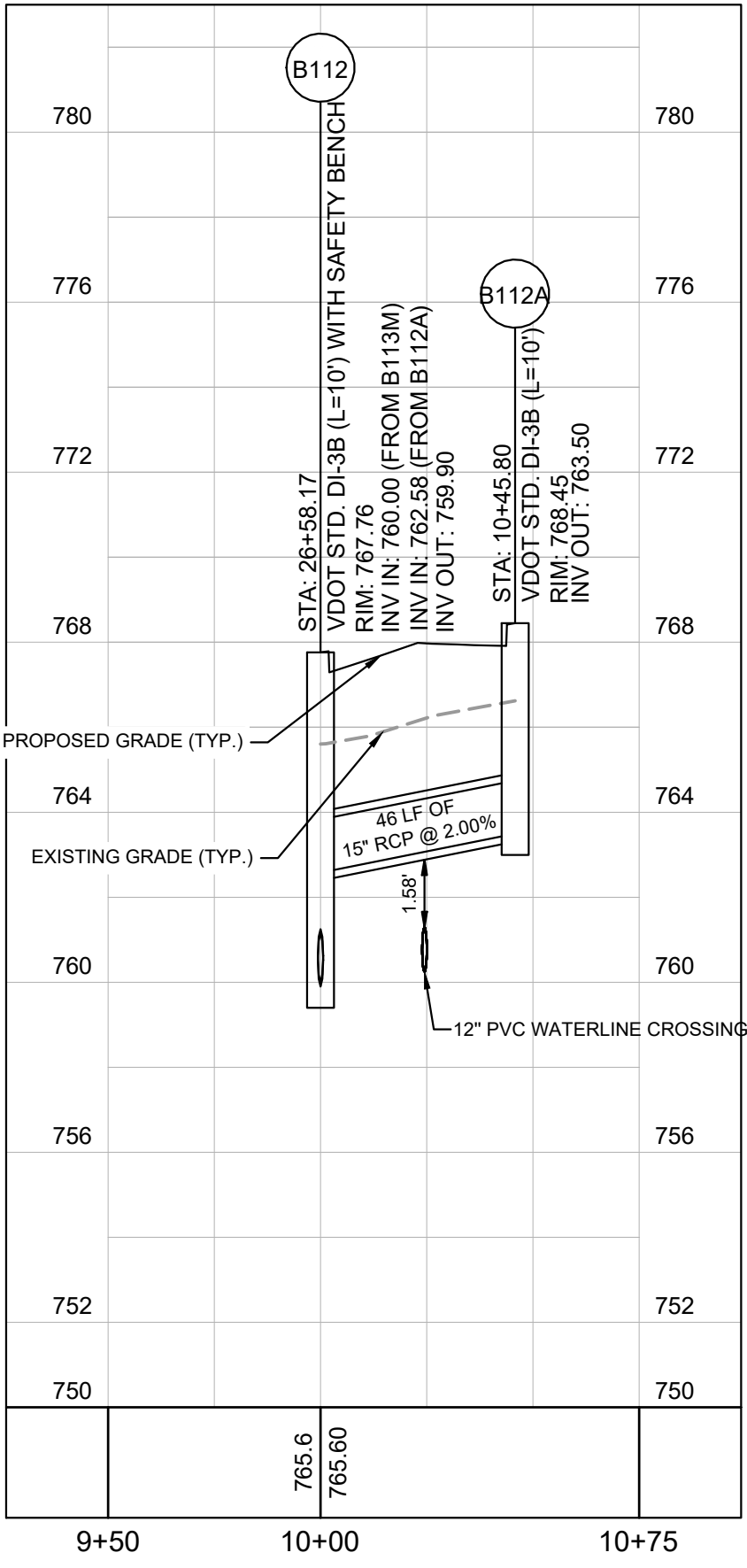
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Plotted By:McCray, Stephen Sheet Set:Kha Layout:CG-307 November 05, 2025 04:43:49pm
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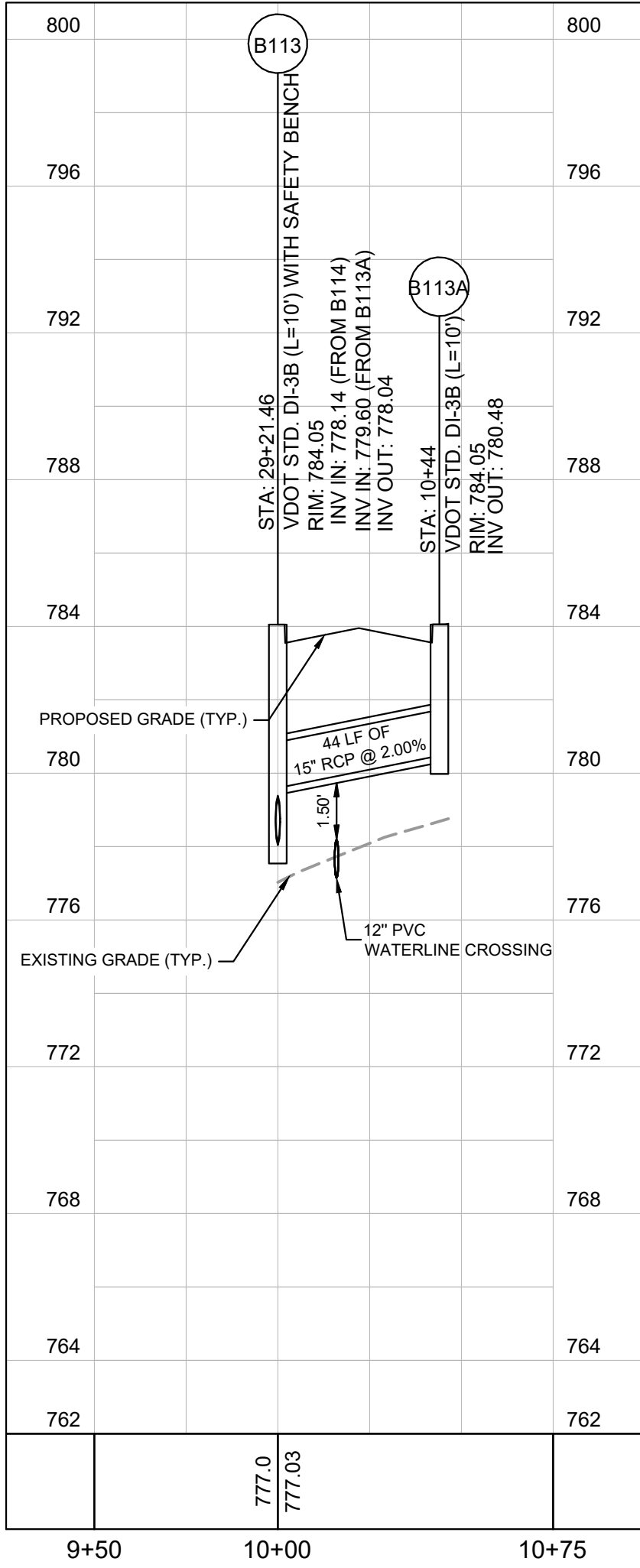
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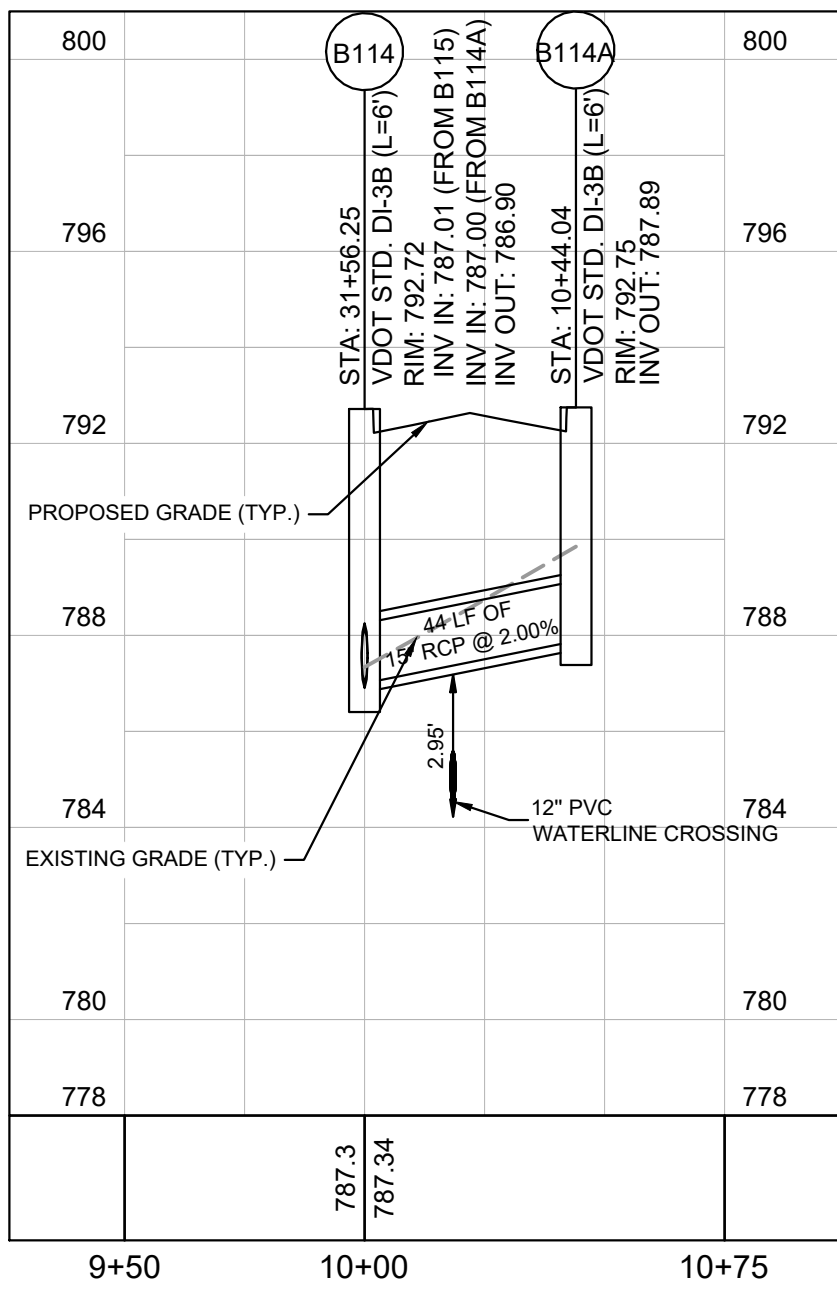
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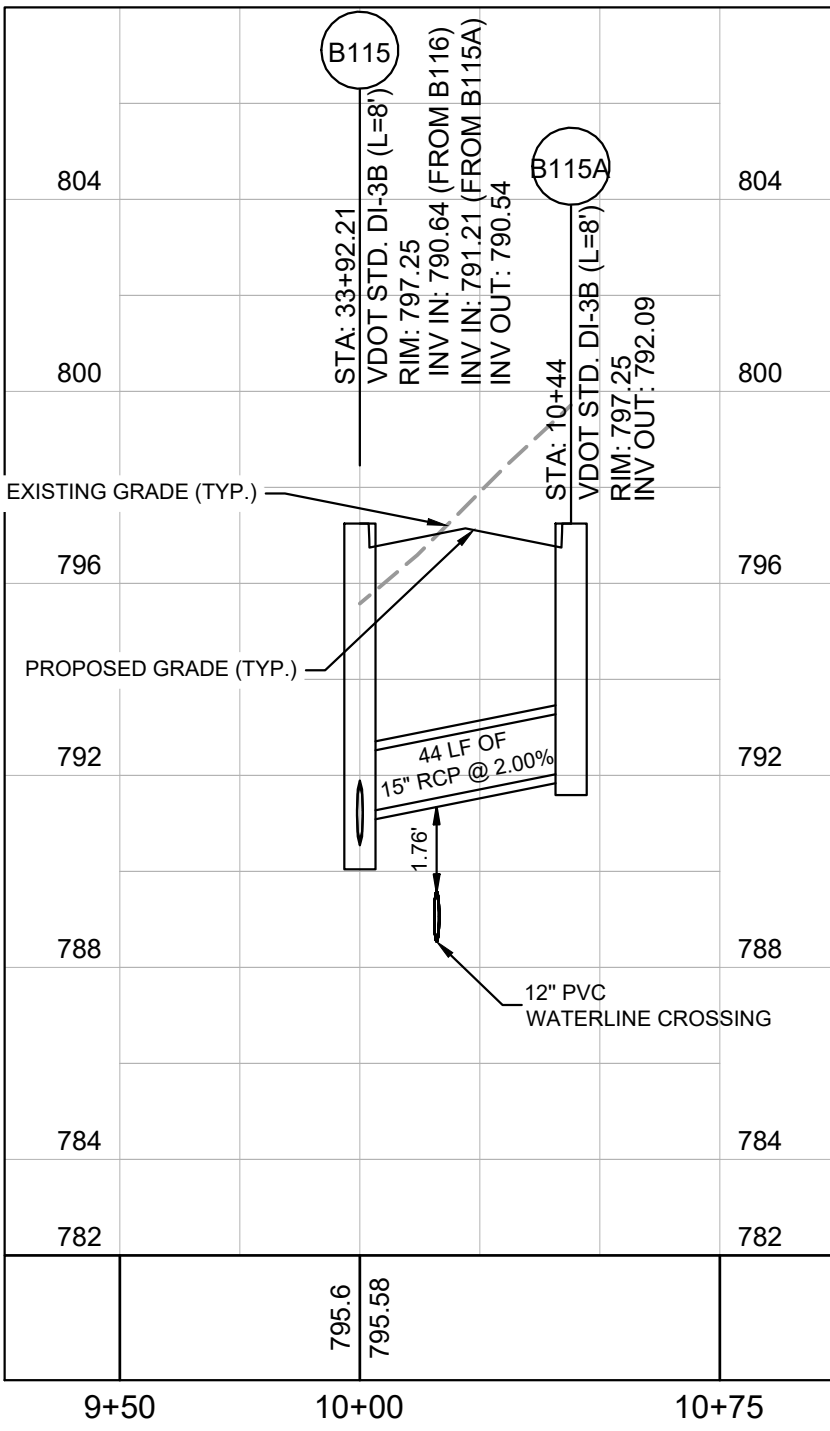
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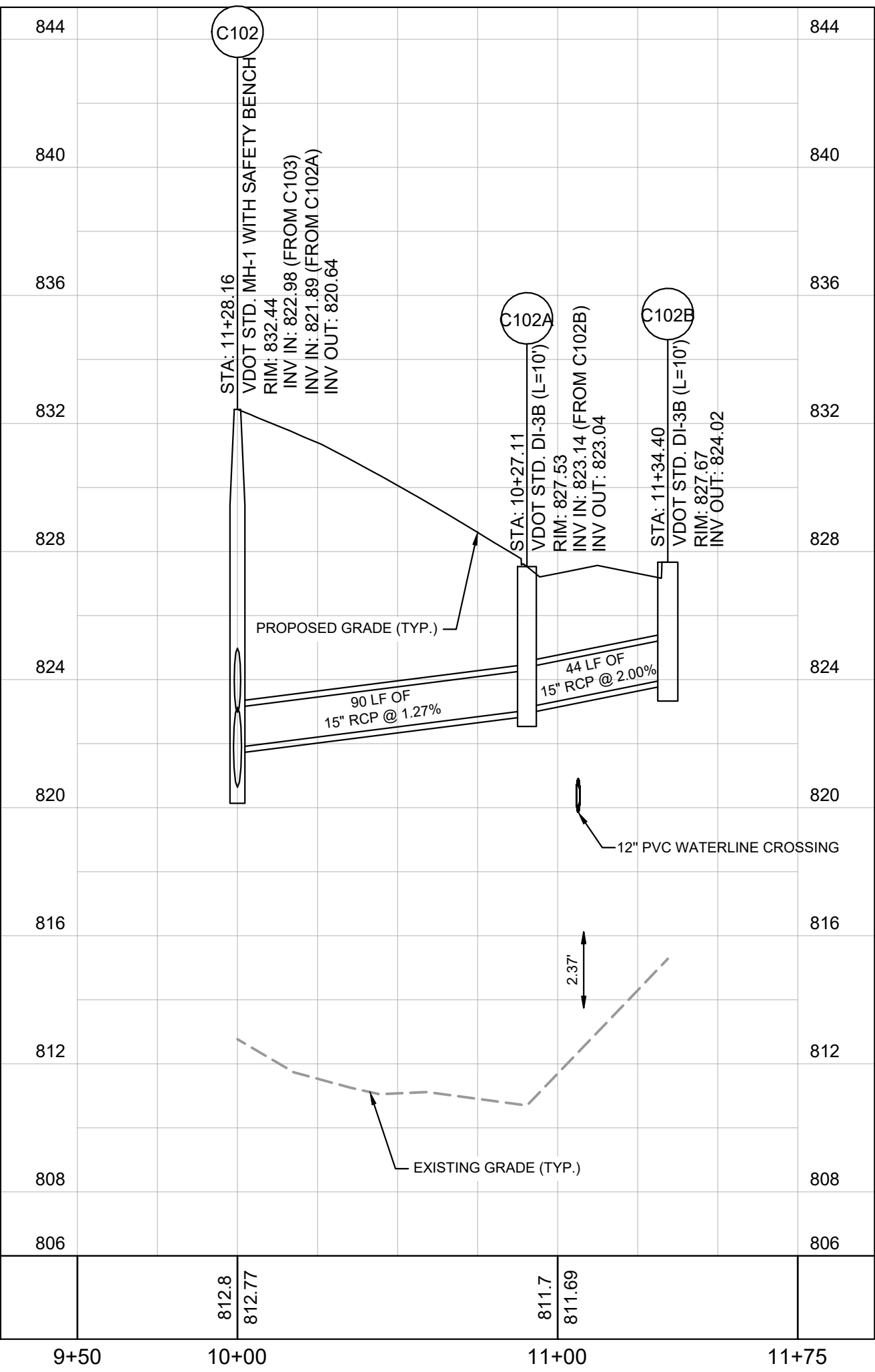
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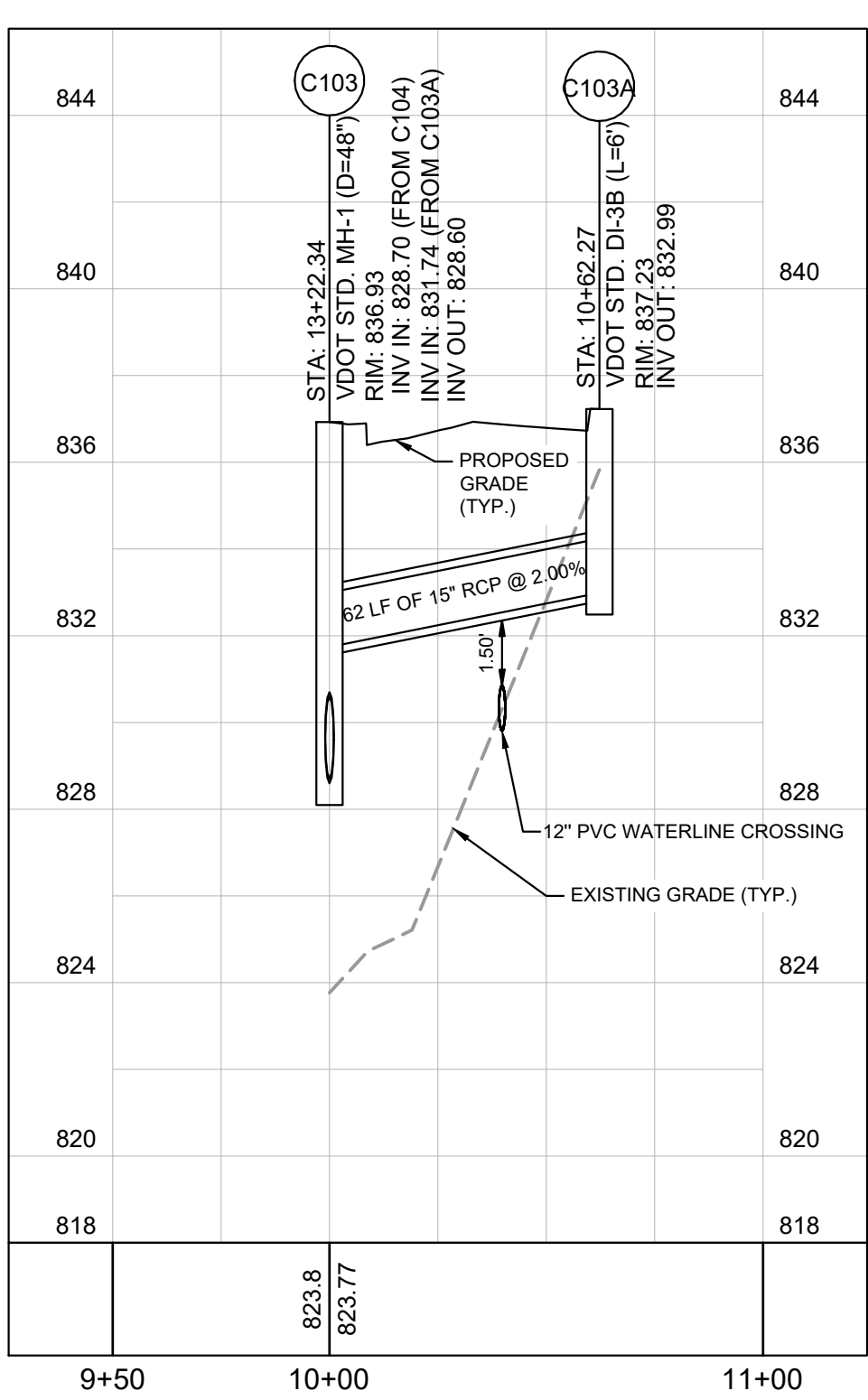
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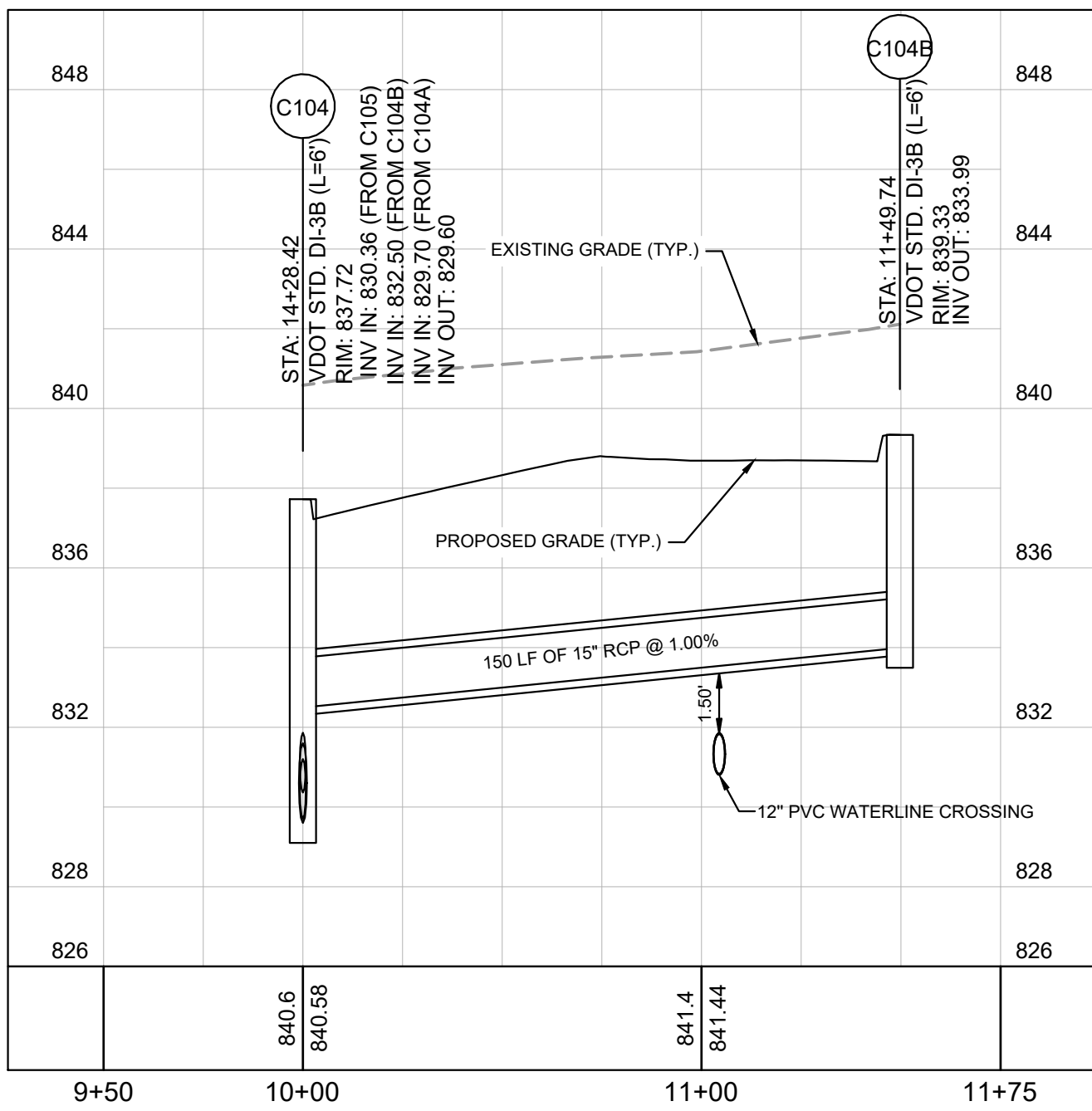
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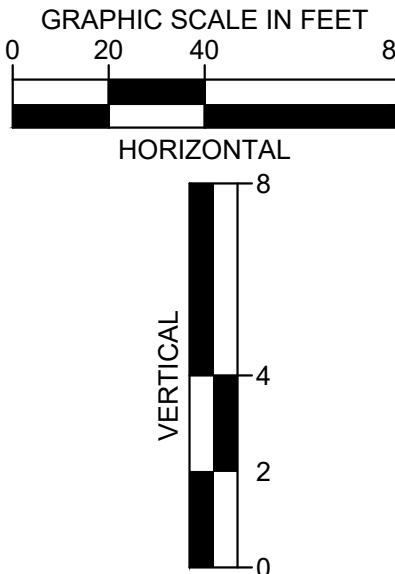
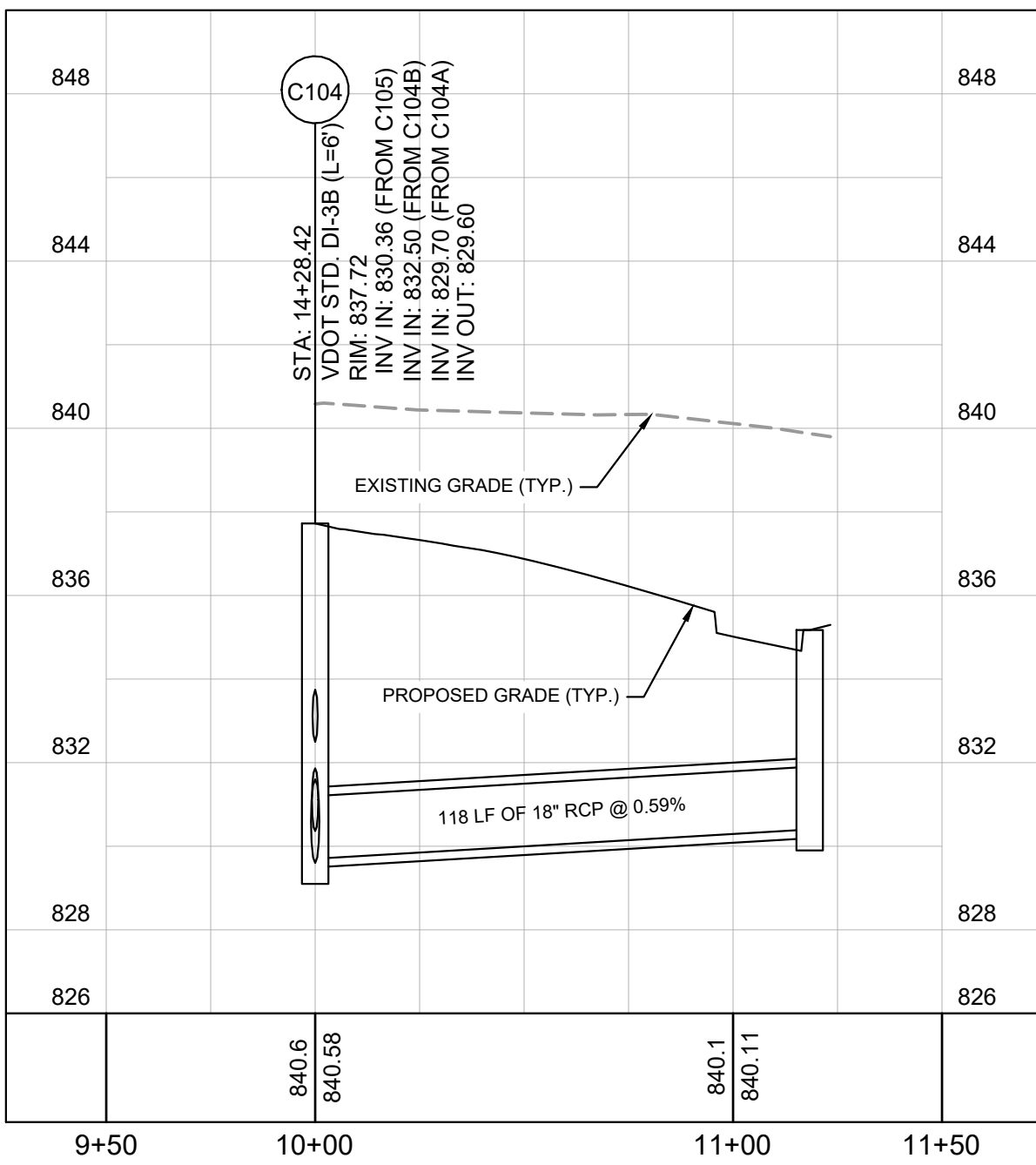
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C104 TO C104B

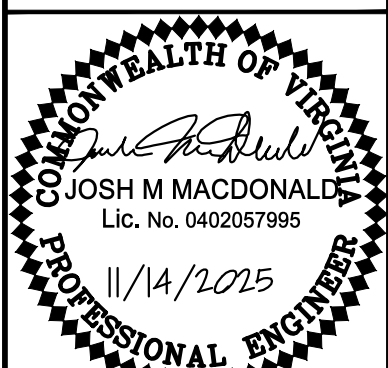


C104 TO C104A





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JOSH M. MACDONALD
Lic. No. 0402057995
11/14/2025

KHA PROJECT	113706001	DATE	11/14/2025	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
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PROJECT HERCULES

STORMWATER PROFILES

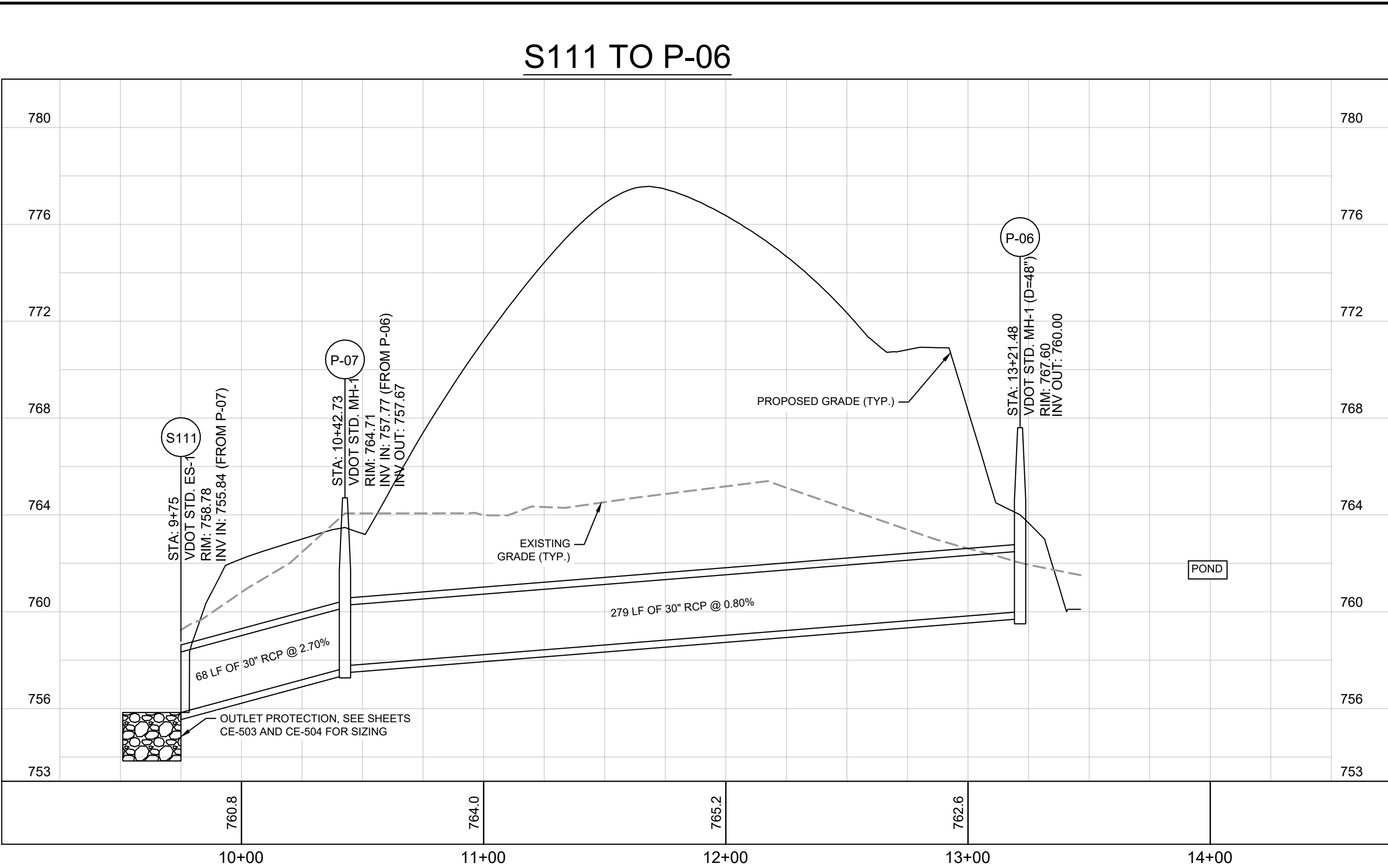
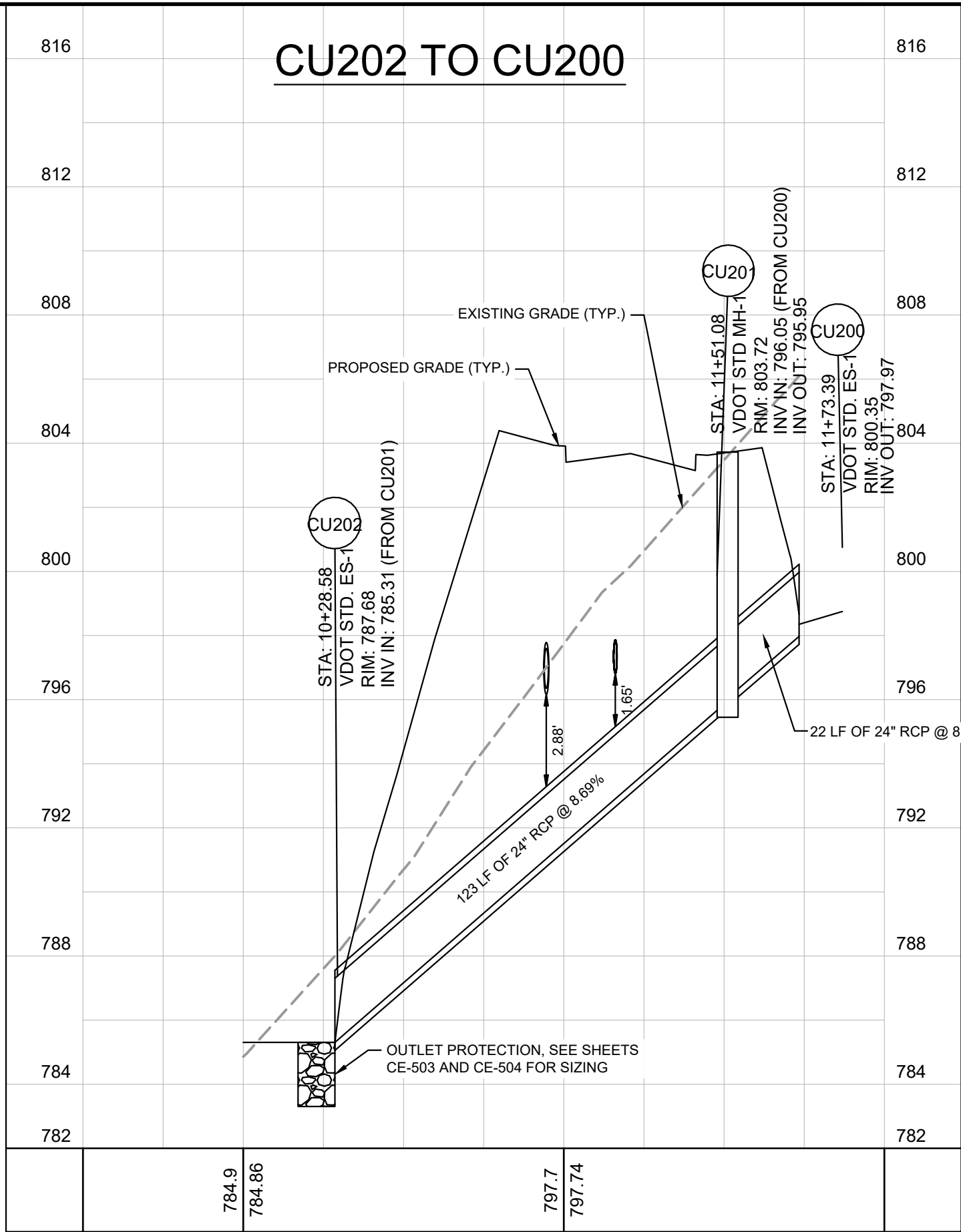
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SHEET NUMBER

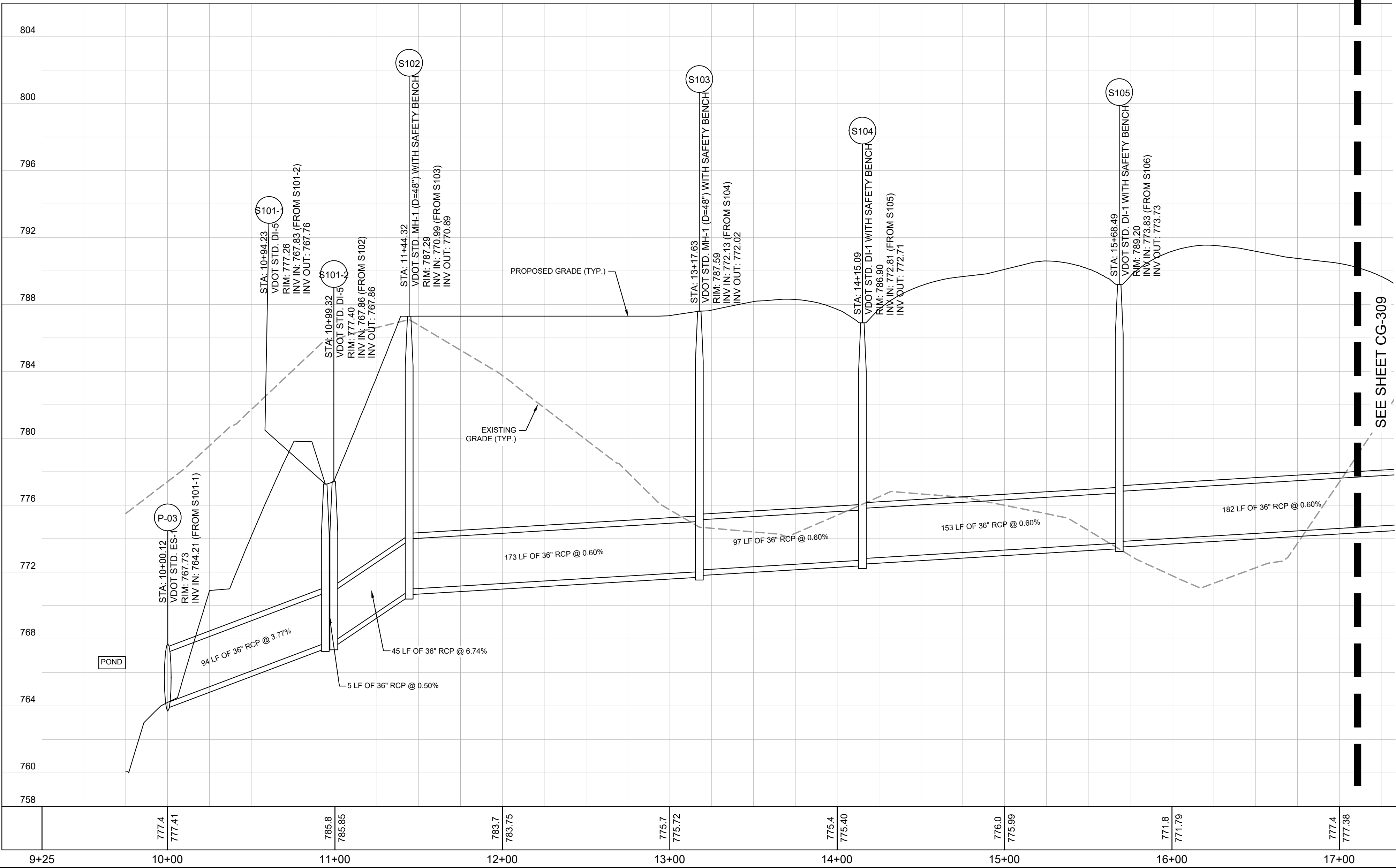
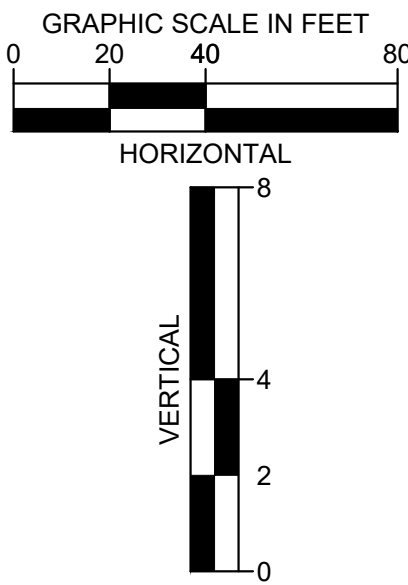
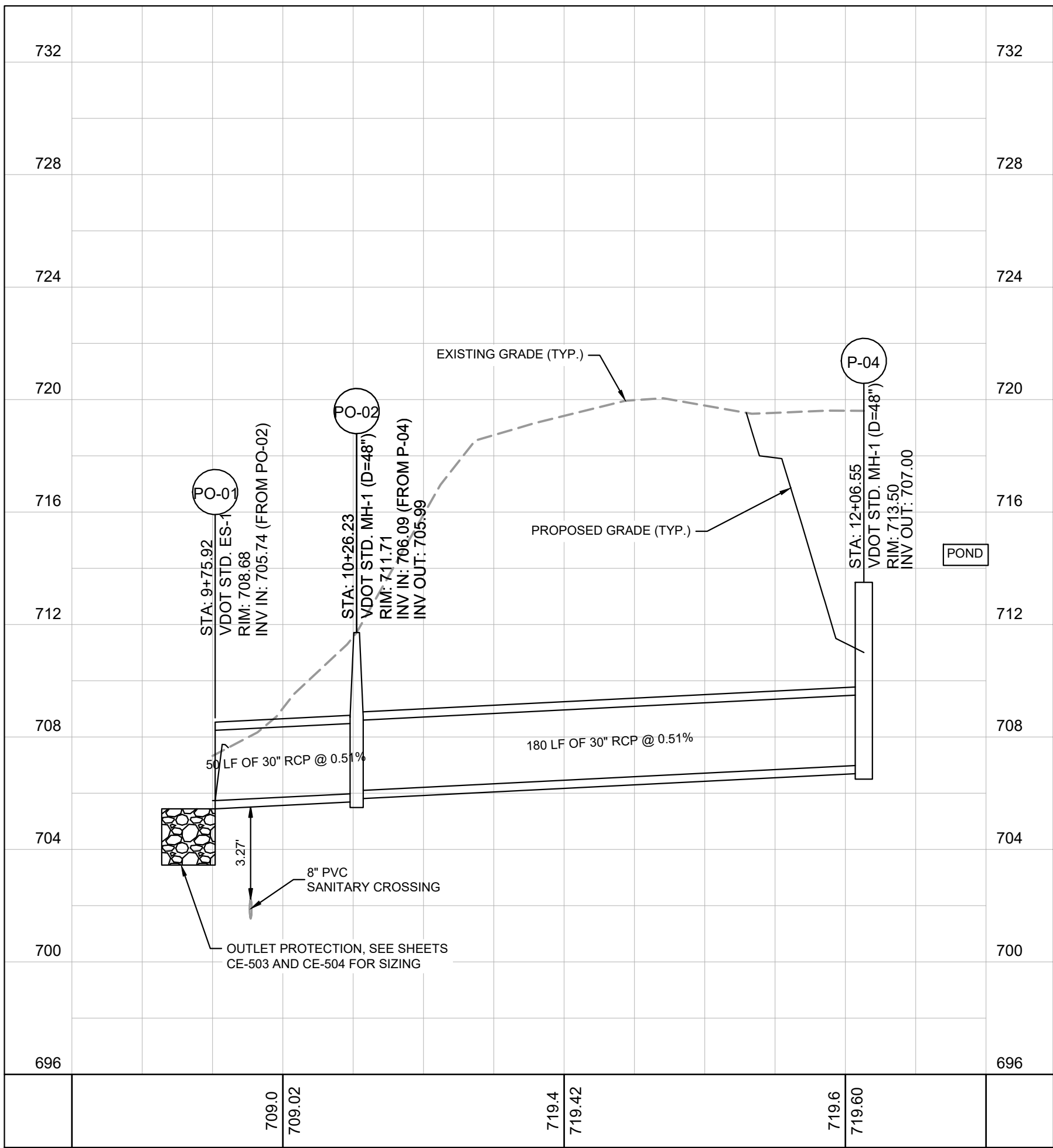
CG-307

APPOMATTOX COUNTY

Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CG-308 November 05, 2025 04:44:04pm
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PO-01 TO P-04



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COMMONWEALTH OF VIRGINIA
JOSH M MACDONALD
Lic. No. 0402057995
11/14/2025
PROFESSIONAL ENGINEER

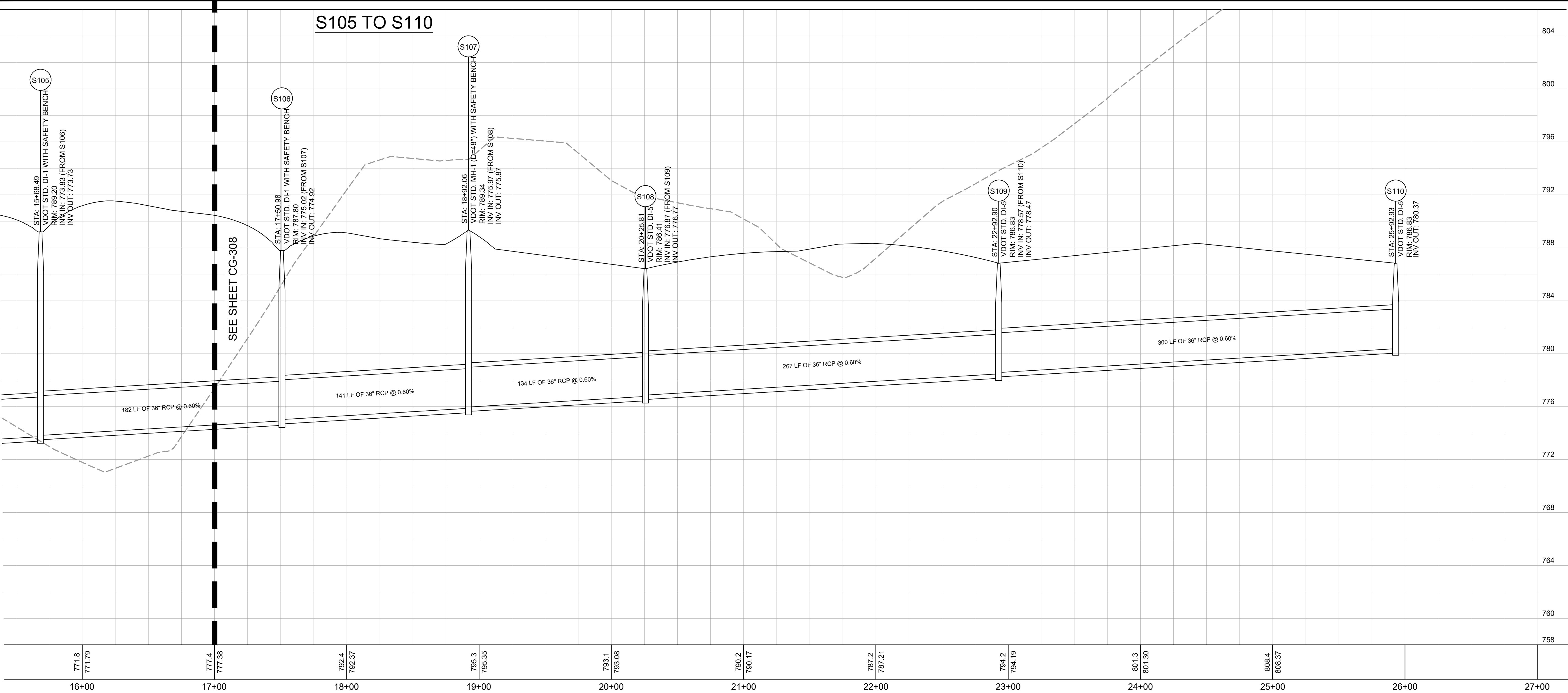
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PROJECT HERCULES

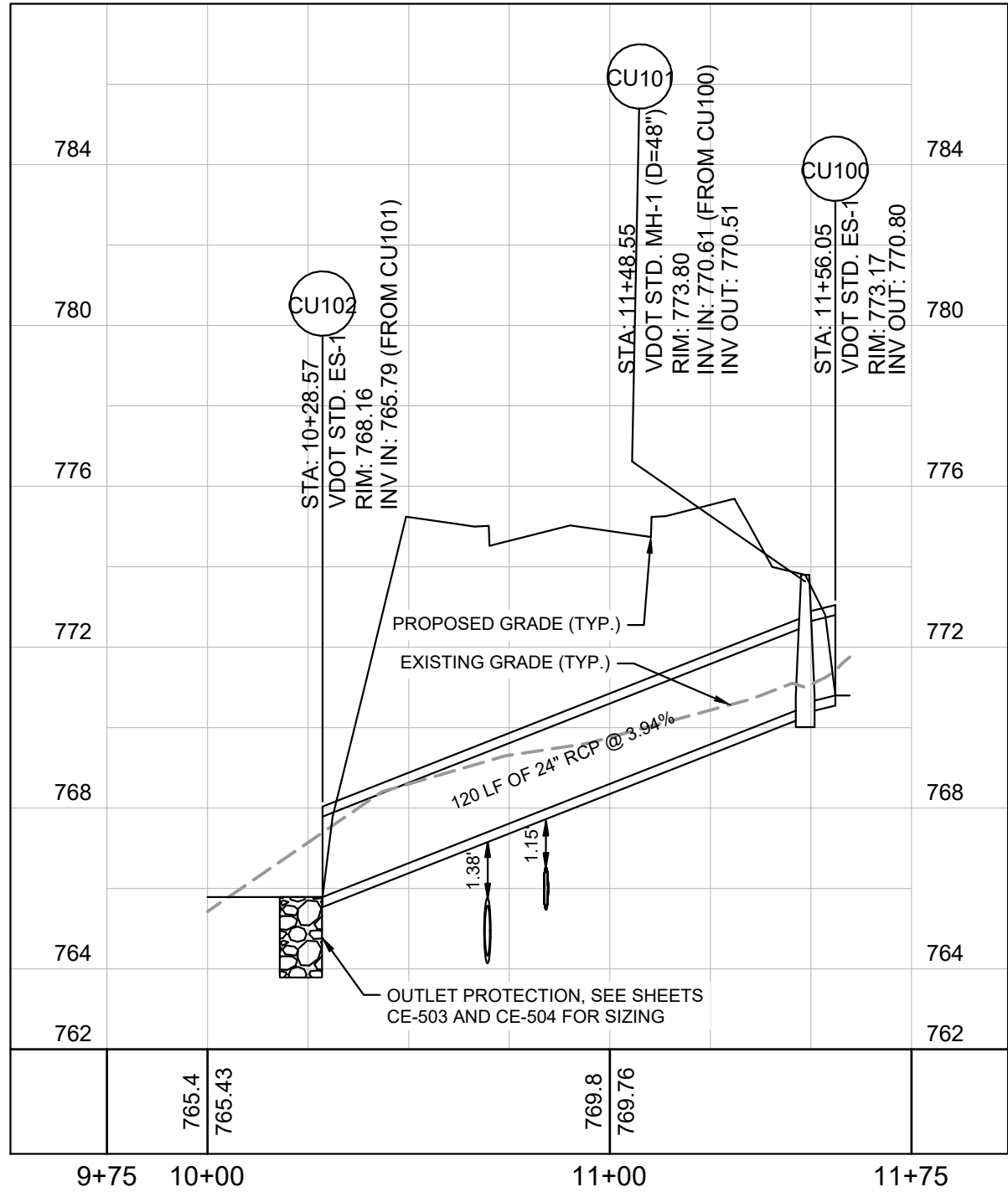
APPOMATTOX COUNTY VA

STORMWATER PROFILES

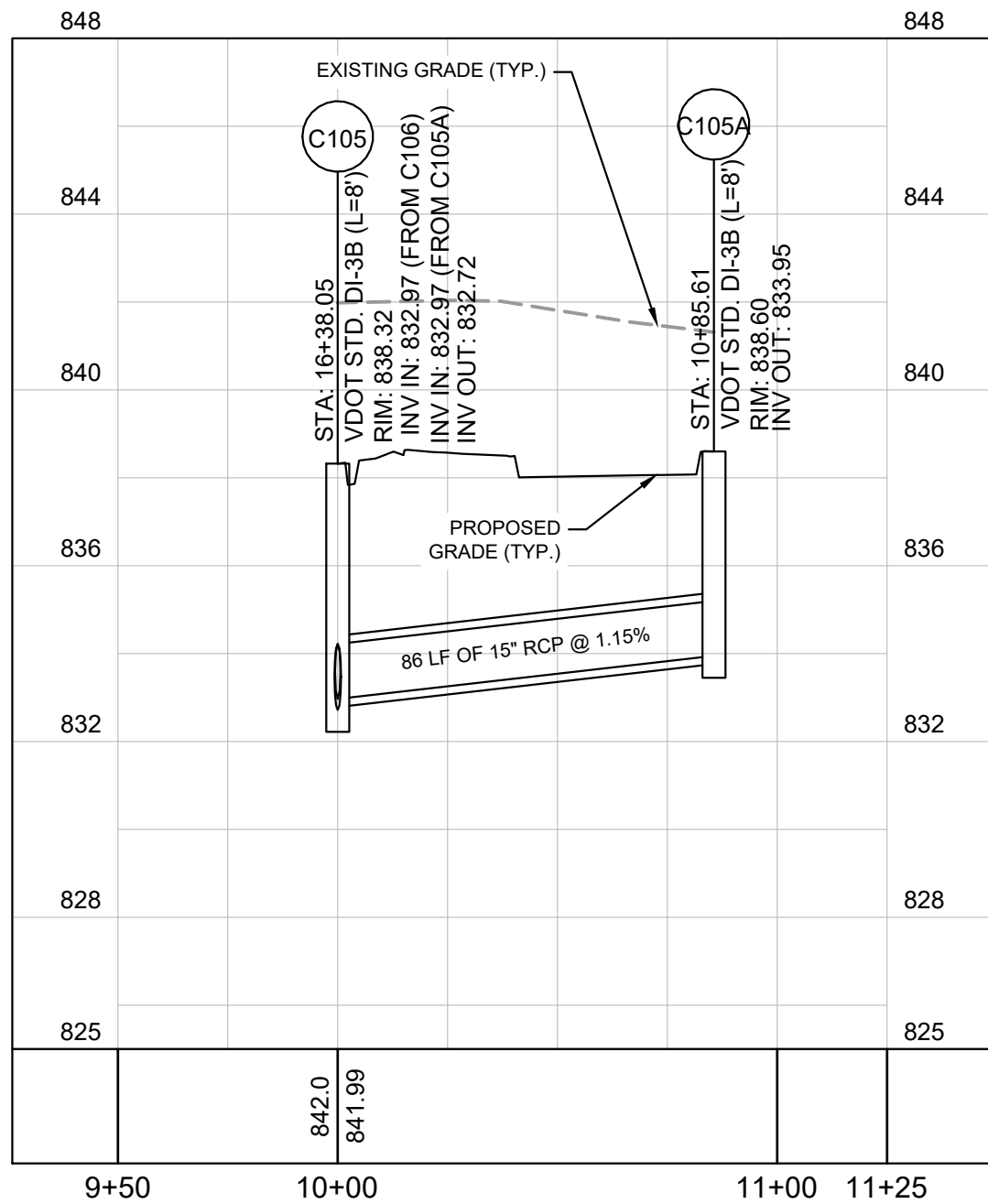
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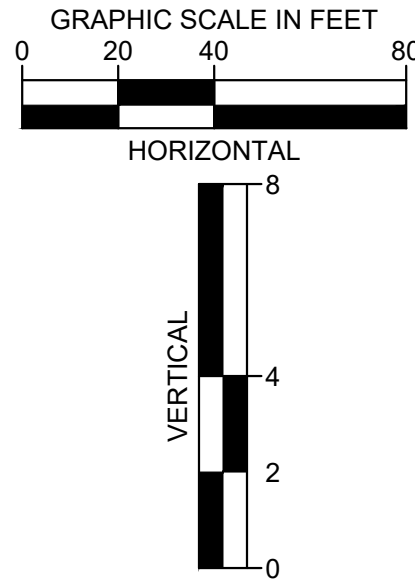
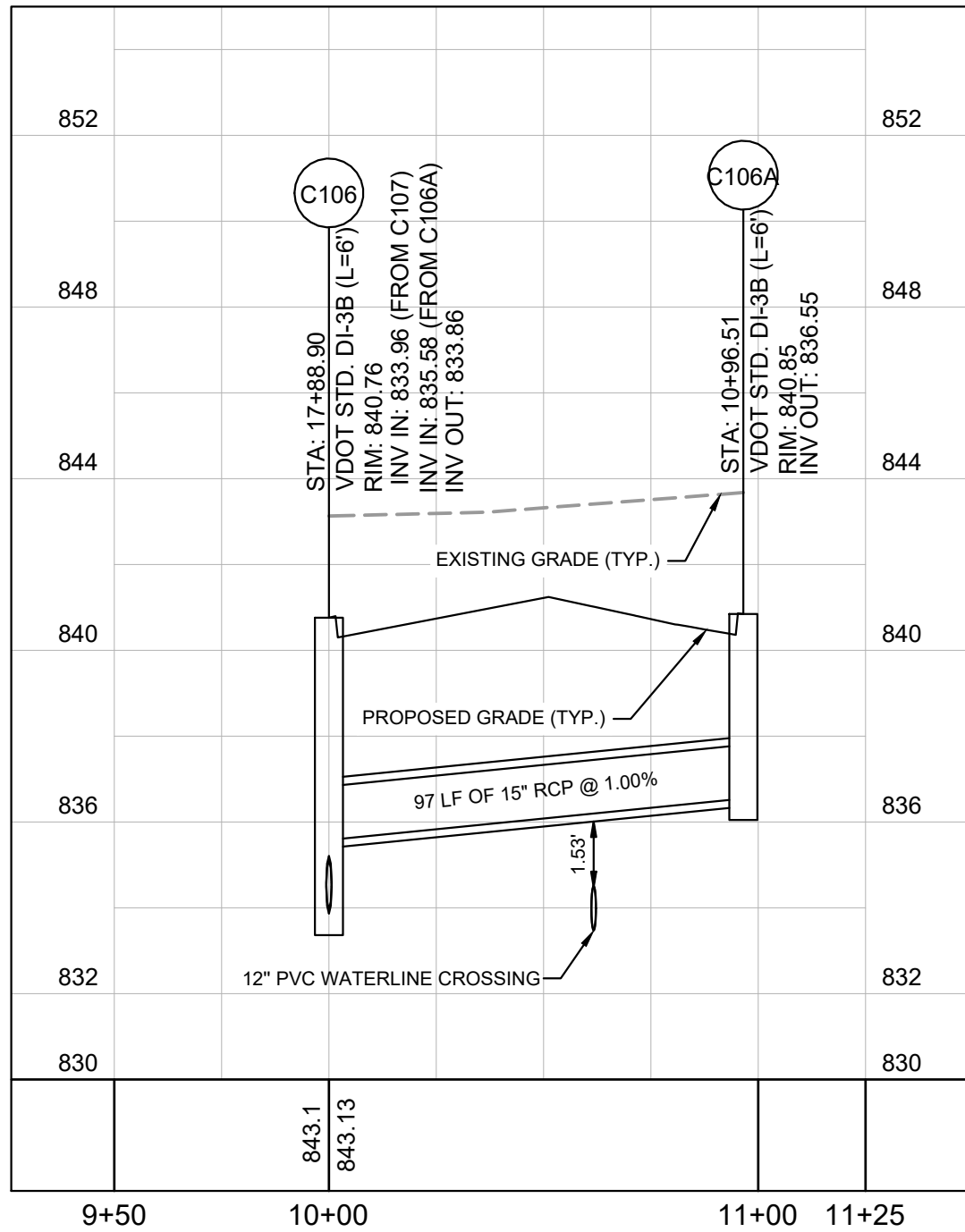
CU102 TO CU100



C105 TO C105A

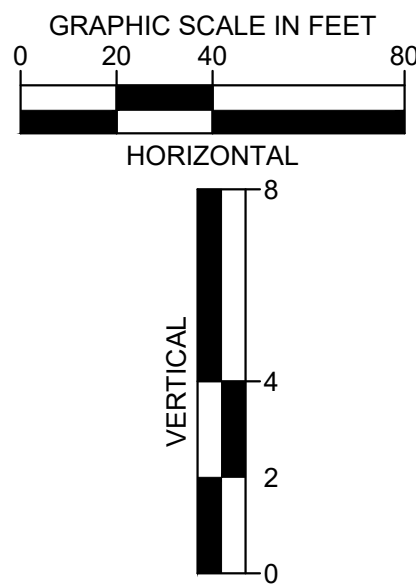
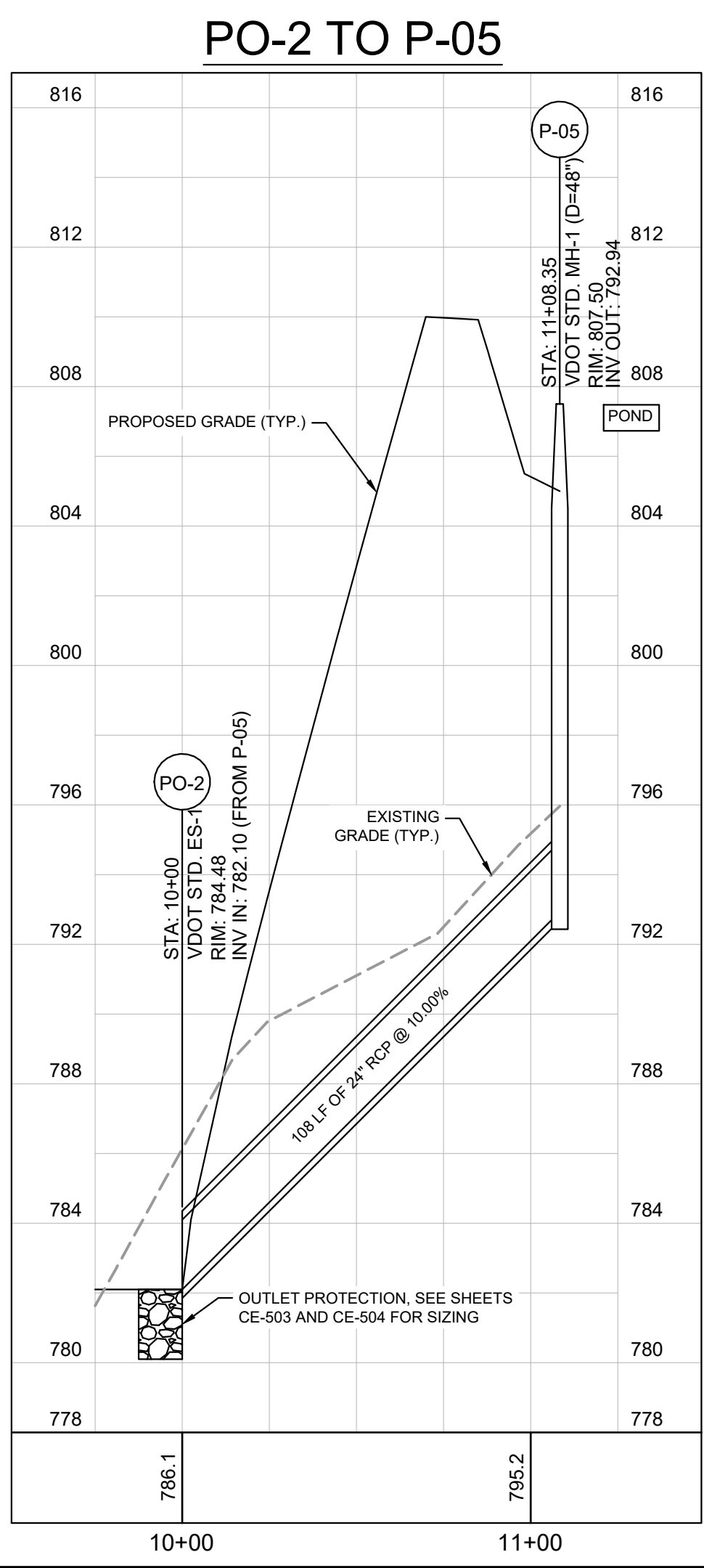
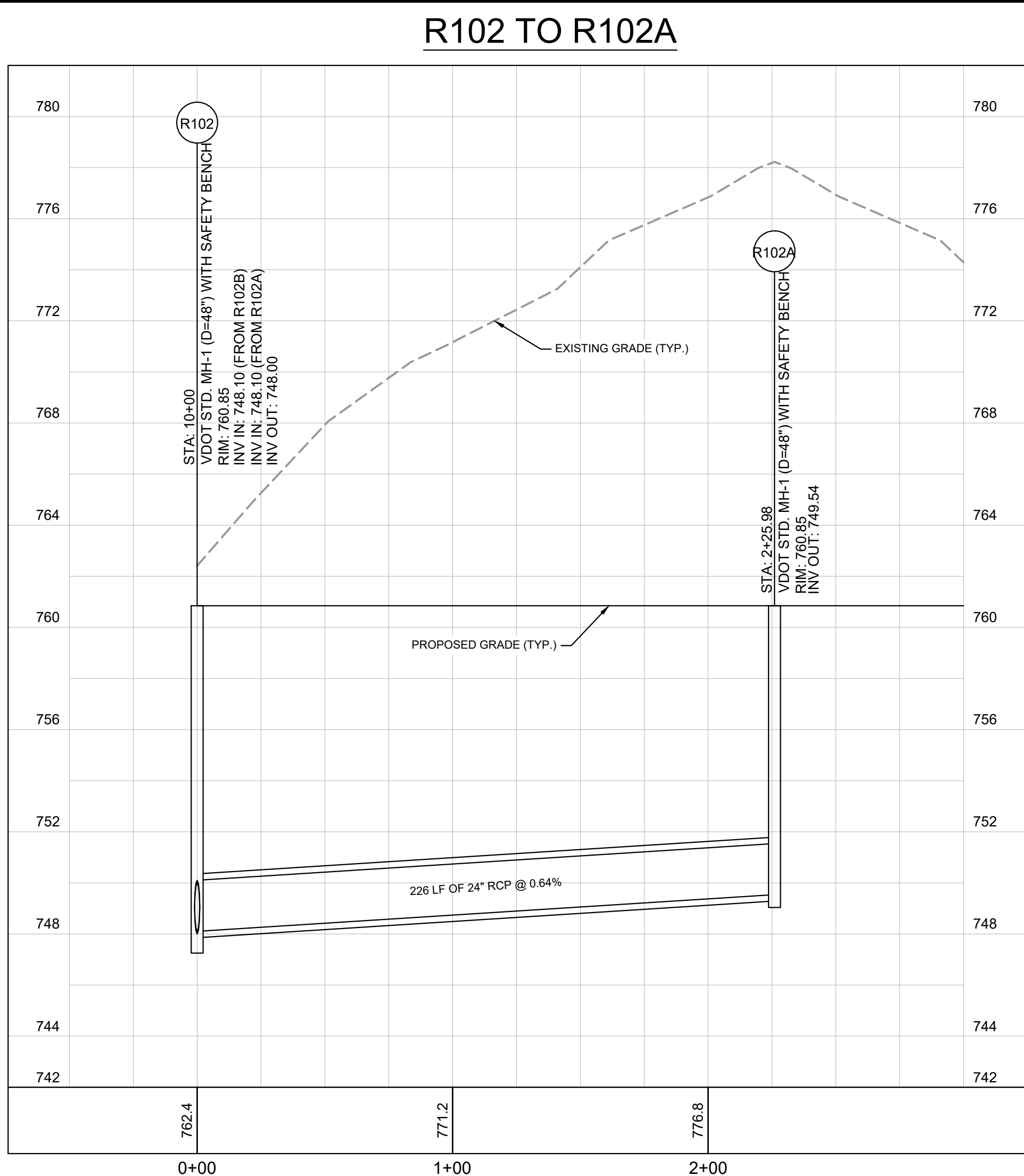
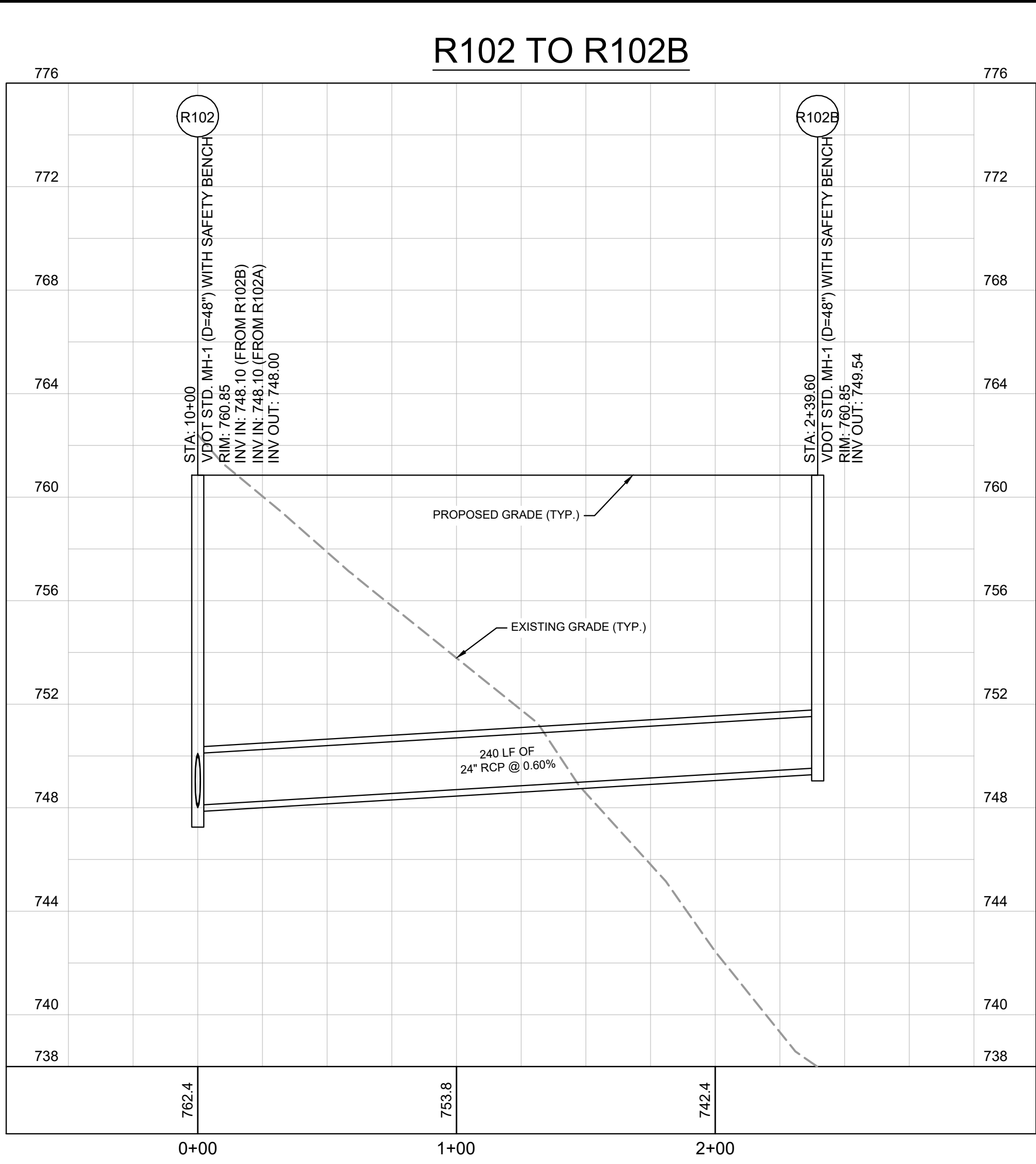
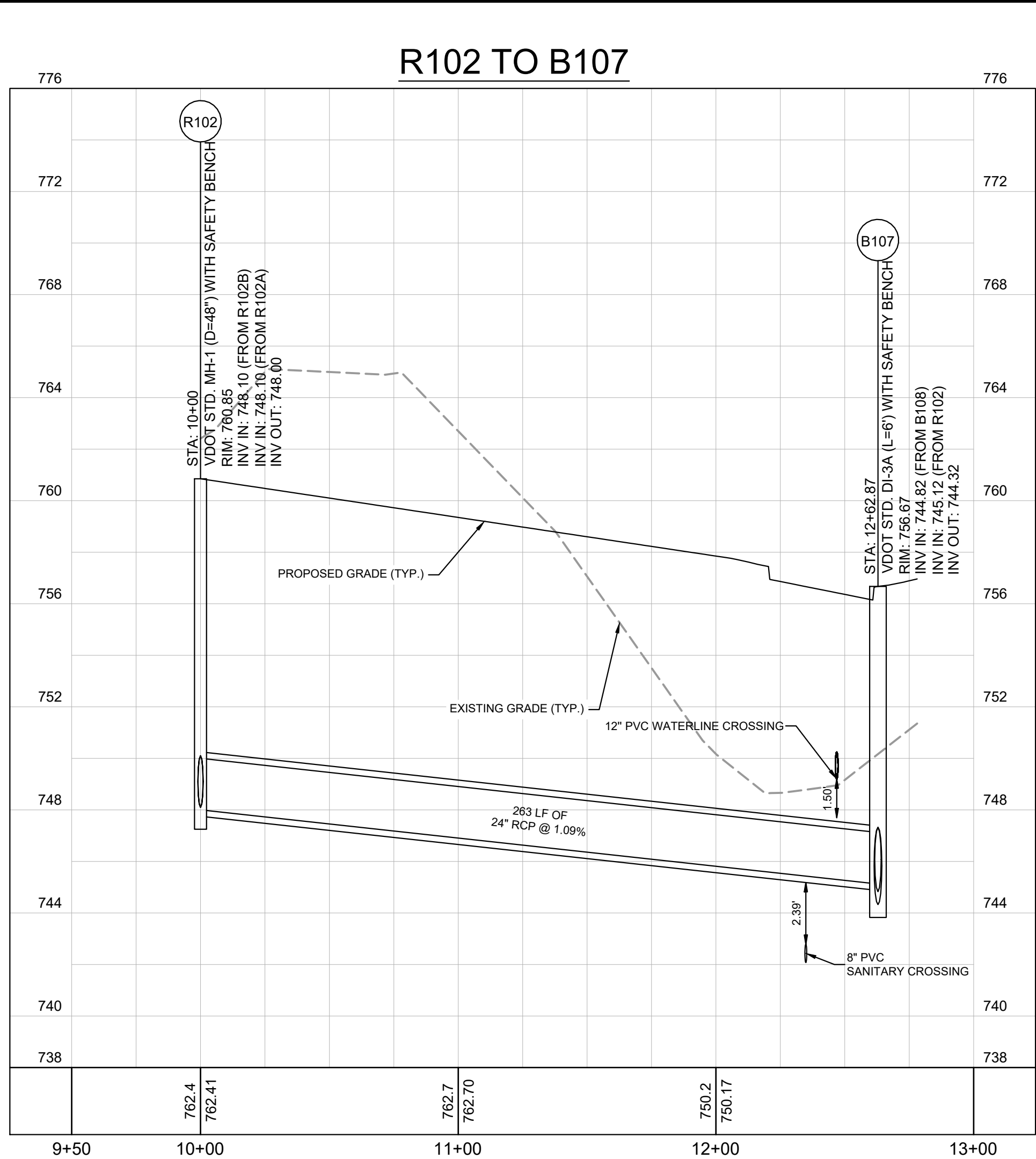
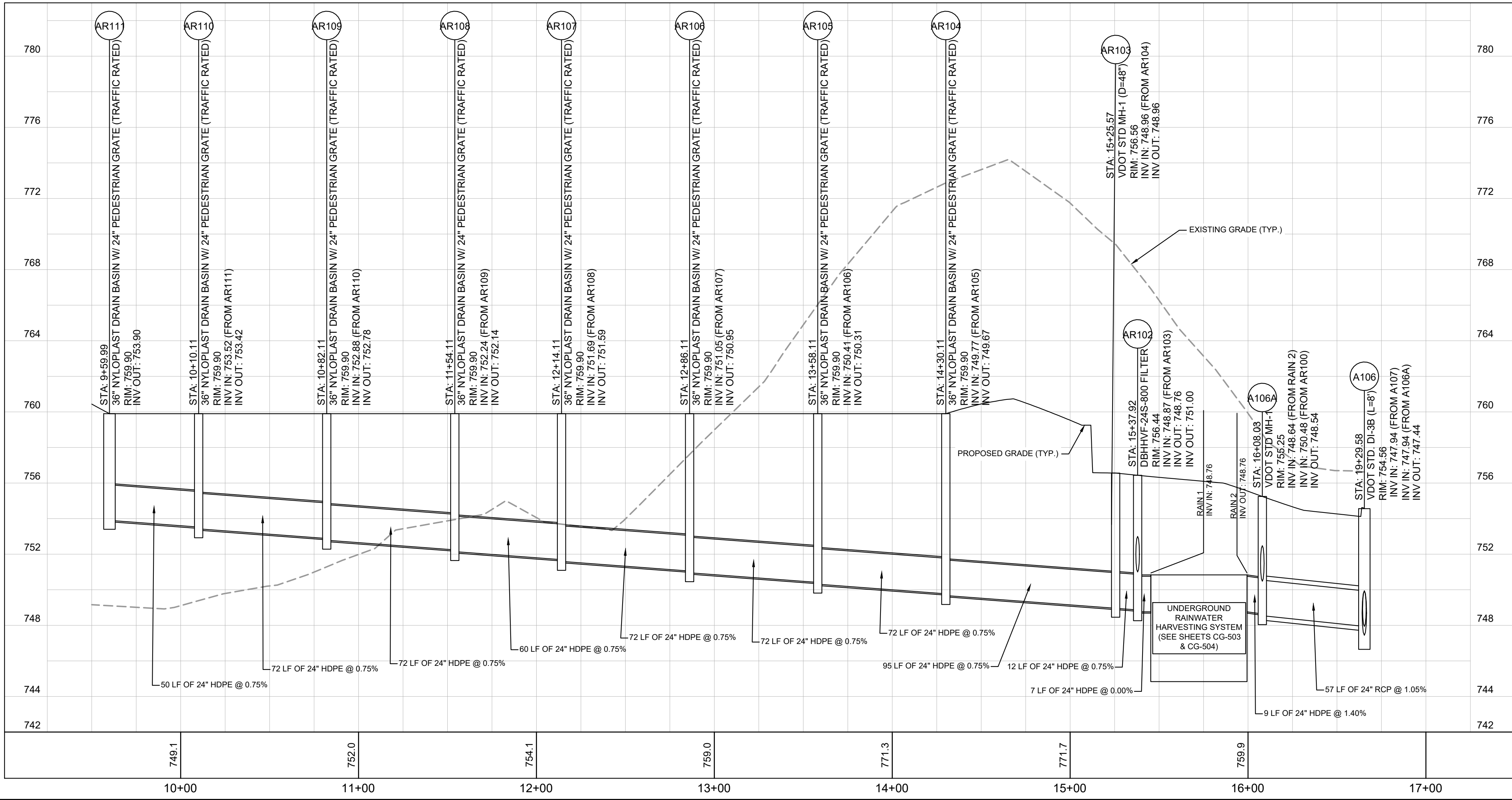


C106 TO C106A



Plotted By:McGray, Stephen Sheet Set:Kha Layout:CG-310 STORM WATER PROFILES November 08, 2025 04:44:38pm

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PROJECT HERCULES

STORM WATER PROFILES

APPOMATTOX COUNTY

VA

SHEET NUMBER

CG-310



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JACOBS

KHA PROJECT	113706001	DATE	11/14/2025	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
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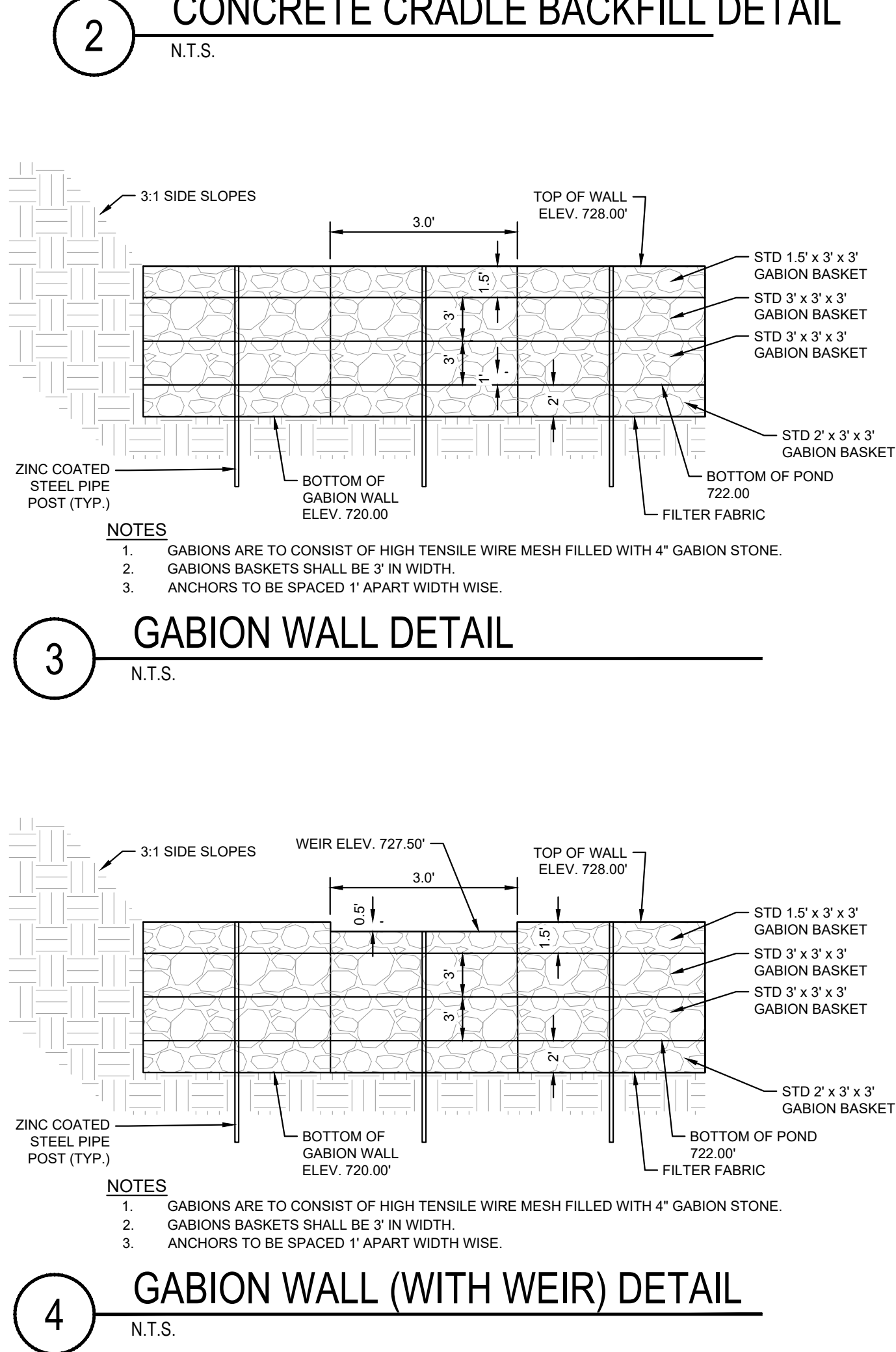
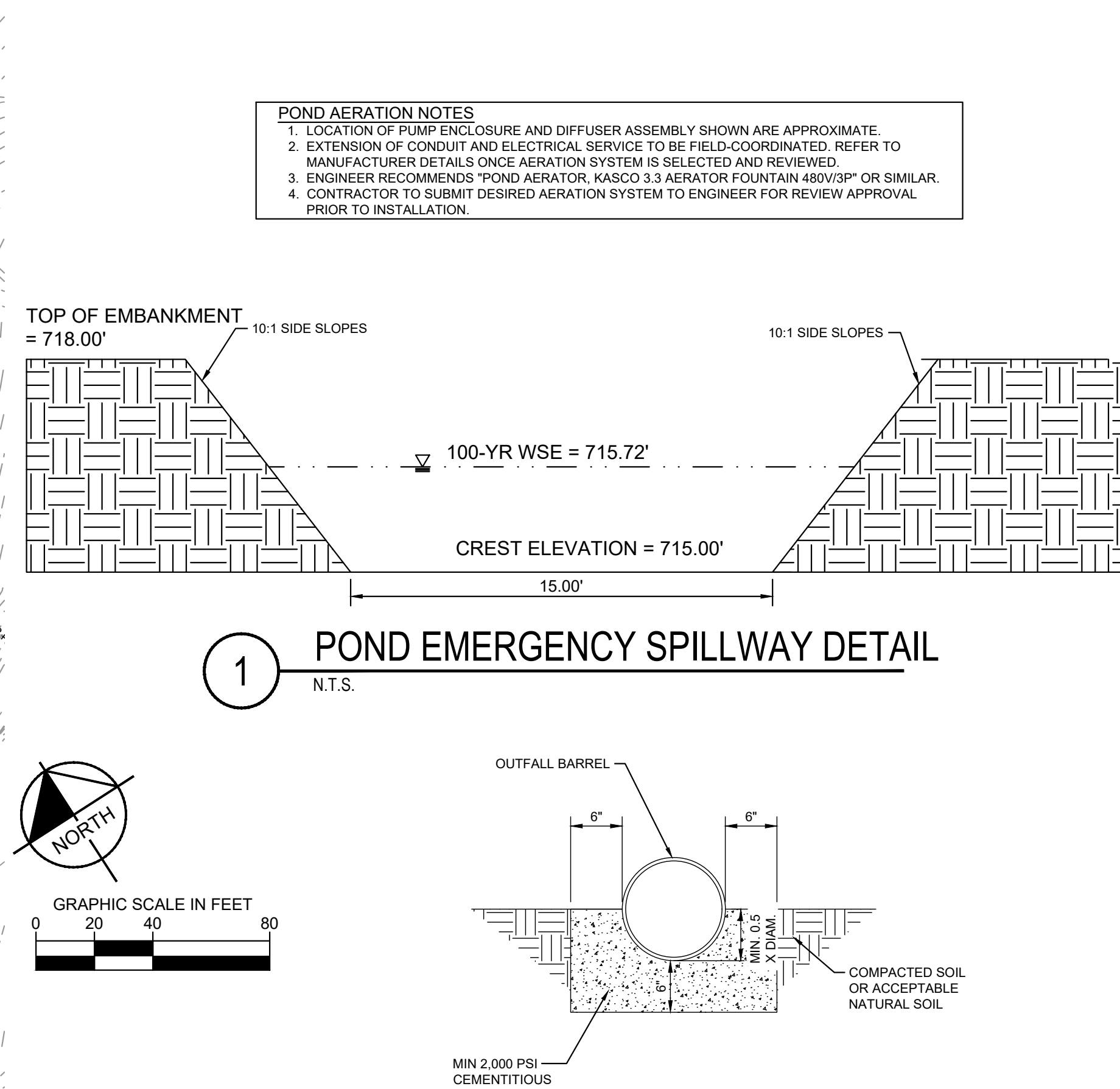
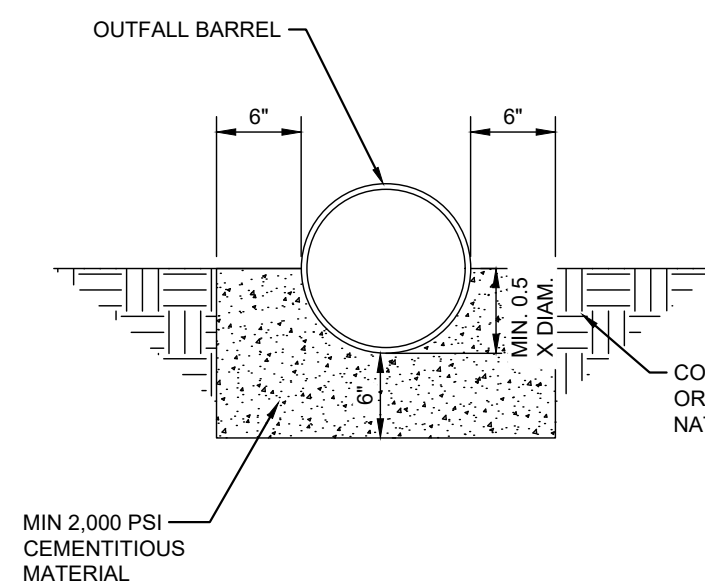

$$1'' = 4' V$$

Diagram illustrating the cross-section of a bridge structure, showing the 100-YR WSE (Water Surface Elevation) and the crest elevation.

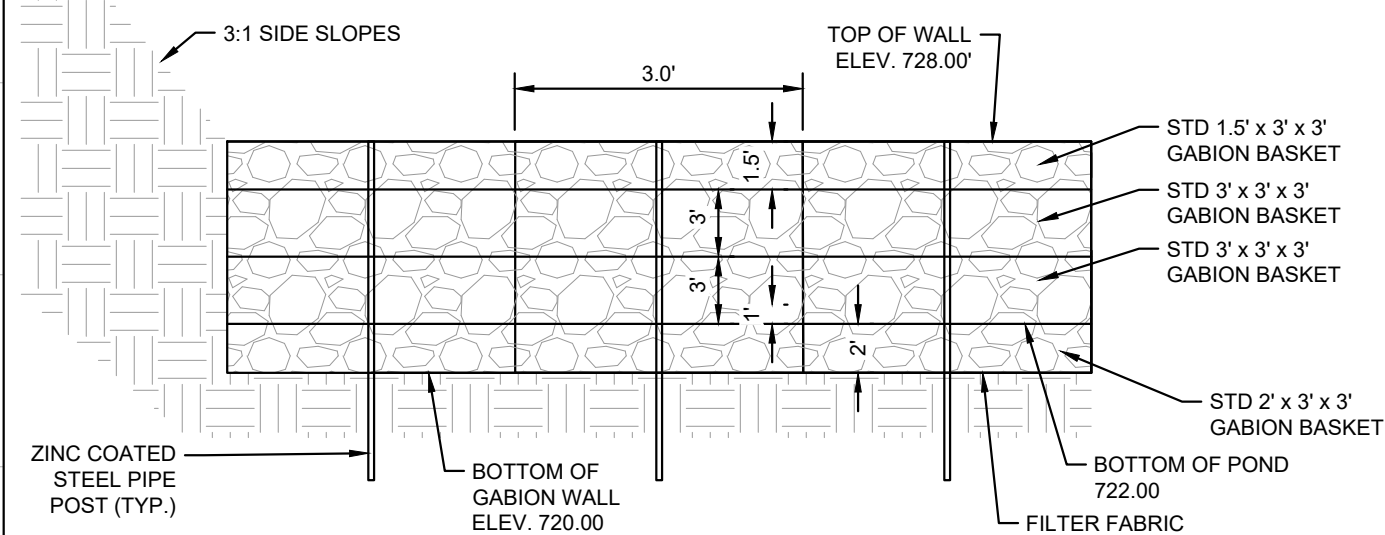
Key dimensions and elevations:

- TOP OF EMBANKMENT = 718.00'
- 10:1 SIDE SLOPES
- 100-YR WSE = 715.72'
- CREST ELEVATION = 715.00'
- 15.00' (width of the embankment base)

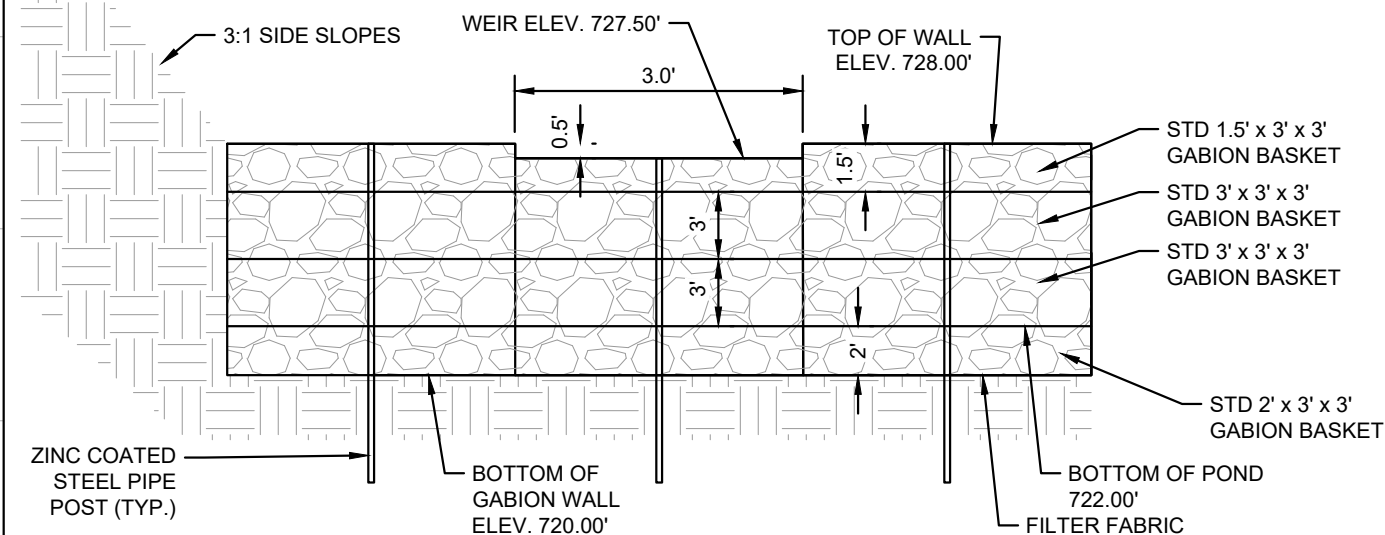
N.T.S.



(2) N.T.S



(3) N.T.S



(4) N.T.S

Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CG-402 STORMWATER POND DETAILS November 05, 2025 04:46:24pm
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DESIGN CRITERIA	
FLOW PATH	0.8 OR MORE
AQUATIC BENCH	10' @ 15% MAX
SAFETY BENCH	8-15' @ 5%
WETLANDS	10% OF TOP BASIN
FOREBAY	15% OF TREATMENT VOLUME

WET POND A FLOW PATH	
SHORTEST FLOW PATH	619
OVERALL LENGTH	619
RATIO	1

WATER SURFACE ELEVATIONS

1 YEAR:	713.19'
2 YEAR:	713.57'
10 YEAR:	714.07'
100 YEAR:	715.72'

FREEBOARD DEPTH REQ'D:	1.00'
FREEBOARD DEPTH PROVIDED:	2.28'

WETLANDS

TOP OF BASIN:	90,560 SF
---------------	-----------

WETLANDS REQ'D:	9,060 SF
WETLANDS PROVIDED:	9,421 SF

POND SIZING INFORMATION

DESIGN LEVEL (1 OR 2):	2
BOTTOM POND ELEV:	707.00'
PERM. POOL ELEV:	711.00'
TREATMENT VOLUME REQ'D:	59,748 CF
TREATMENT VOLUME PROVIDED:	145,324 CF
PERMANENT POOL DEPTH:	4.0'

FOREBAY DEPTH REQ'D:	4'
FOREBAY DEPTH PROVIDED:	6.0'
FOREBAY VOLUME REQ'D:	8,096 CF
FOREBAY VOLUME PROVIDED:	12,923 CF

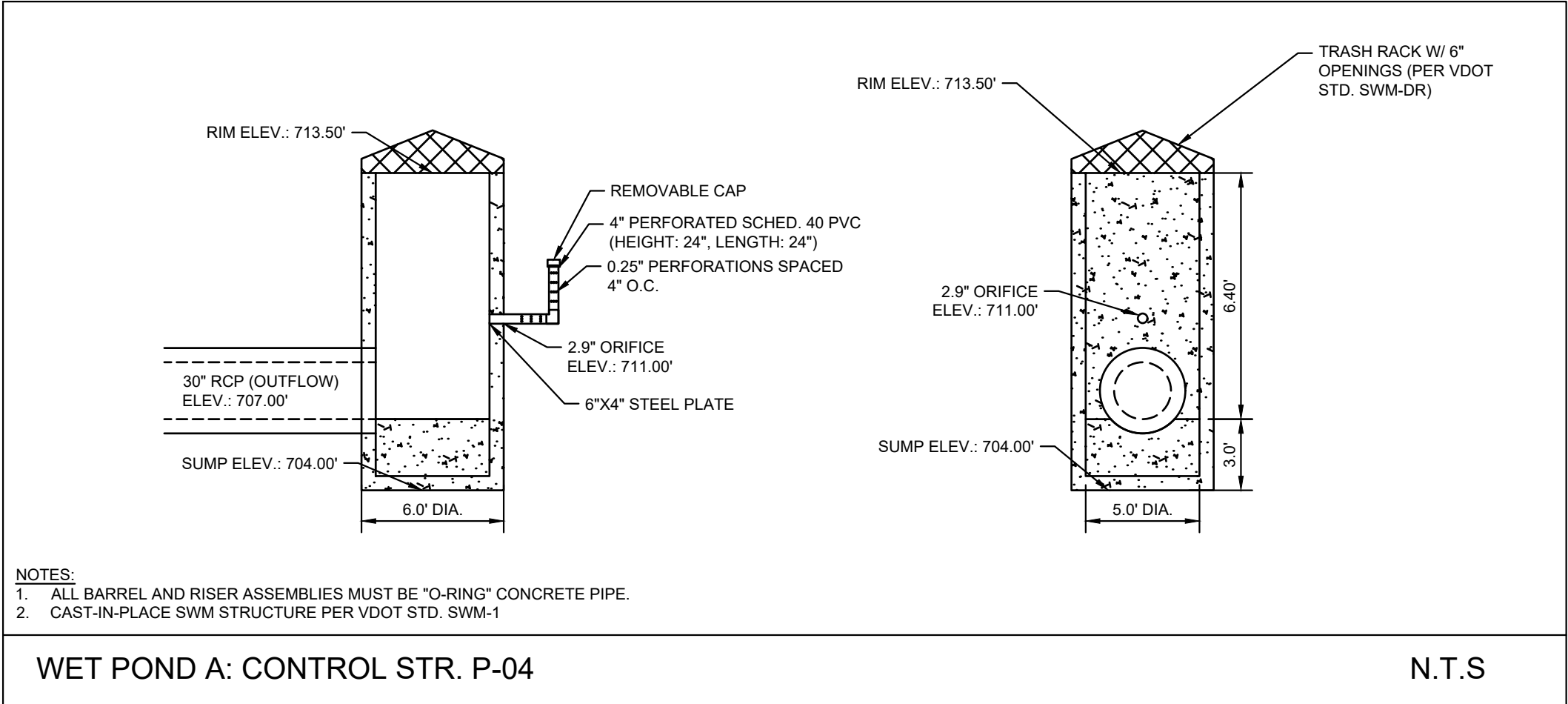
POND A SEDIMENT FOREBAY			
ELEV.	AREA (SF)	STORAGE (CF)	CUMULATIVE STORAGE (CF)
707.00	1050	0	0
707.50	1139	547	547
708.00	1231	593	1140
708.50	1327	640	1779
709.00	1426	688	2468
709.50	1529	739	3206
710.00	1635	791	3997
710.50	2015	913	4910
711.00	2435	1113	6022
711.50	3391	1457	7479
712.00	3548	1735	9214
712.50	3709	1814	11028
713.00	3873	1896	12923

POND A BUOYANCY CALCULATIONS		
RISER STRUCTURE		
RISER INSIDE DIAMETER	5	FT
RISER INSIDE AREA	19.6	SF
RISER WALL THICKNESS	0.5	FT
RISER OUTSIDE DIAMETER	6	FT
RISER OUTSIDE AREA	28.3	SF
RISER HEIGHT	6.4	FT
RISER CONCRETE VOLUME	55.29	CF
BASE AREA	28.3	SF
BASE HEIGHT	3	FT
BASE VOLUME	84.9	CF
TOTAL CONCRETE VOLUME	140.12	CF
VOIDS		
1-3.0" ORIFICE	.02	CF
1-24" CULVERT	1.57	CF
TOTAL VOIDS VOLUME	1.60	CF
TOTAL VOLUME OF CONCRETE	138.52	CF
UNIT WEIGHT OF CONCRETE	145	LB/CF
CONCRETE FORCE	20,085	LB
VOLUME OF DISPLACED WATER	125.66	CF
UNIT WEIGHT OF WATER	62.4	LB/CF
BUOYANT FORCE OF WATER	7841.42	LB
SAFETY FACTOR	2.56	(MIN 1.25)
WILL IT FLOAT?		NO

- WET AND DRY POND SEQUENCE OF CONSTRUCTION:
- USE OF WET POND AS AN E&S CONTROL. INSTALLATION OF THE PERMANENT RISER SHOULD BE INITIATED DURING THE CONSTRUCTION PHASE, AND DESIGN ELEVATIONS SHOULD BE SET WITH FINAL CLEANOUT OF THE SEDIMENT BASIN AND CONVERSION TO THE POST-CONSTRUCTION WET POND IN MIND. APPROPRIATE PROCEDURES SHOULD BE IMPLEMENTED TO PREVENT DISCHARGE OF TURBID WATERS WHEN THE BASIN IS BEING CONVERTED INTO A WET POND.
 - STABILIZE THE DRAINAGE AREA. WET PONDS SHOULD ONLY BE CONSTRUCTED AFTER THE CONTRIBUTING DRAINAGE AREA TO THE POND IS COMPLETELY STABILIZED SINCE THE PROPOSED POND SITE WILL BE USED AS A SEDIMENT BASIN DURING THE CONSTRUCTION PHASE. THE FACILITY WILL BE DEWATERED, DREDGED AND RE-GRADED TO DESIGN DIMENSIONS AFTER THE ORIGINAL SITE CONSTRUCTION IS COMPLETE.
 - ASSEMBLE CONSTRUCTION MATERIALS ON-SITE, MAKE SURE THEY MEET DESIGN SPECIFICATIONS, AND PREPARE ANY STAGING AREAS.
 - INSTALL E&S CONTROLS PRIOR TO CONSTRUCTION, INCLUDING TEMPORARY DE-WATERING DEVICES AND STORMWATER DIVERSION PRACTICE. ALL AREAS SURROUNDING THE POND THAT ARE GRADED OR DENUDED DURING CONSTRUCTION MUST BE PLANTED WITH TURF GRASS, NATIVE PLANTINGS, OR OTHER APPROVED METHODS OF SOIL STABILIZATION.
 - CLEAR AND STRIP THE PROJECT AREA TO THE DESIRED SUB-GRADE.
 - EXCAVATE THE CORE TRENCH AND INSTALL THE SPILLWAY PIPE.
 - INSTALL THE RISER STRUCTURE AND ENSURE THE TOP INVERT OF THE OVERFLOW WEIR IS CONSTRUCTED AT THE DESIGN ELEVATION.
 - CONSTRUCT THE EMBANKMENT AND ANY INTERNAL BERMS IN 8-12 INCH LIFTS, OR AS DIRECTED BY GEOTECHNICAL RECOMMENDATIONS, AND COMPACT AS REQUIRED WITH APPROPRIATE EQUIPMENT.
 - EXCAVATE/GRADE UNTIL THE APPROPRIATE ELEVATION AND DESIRED CONTOURS ARE ACHIEVED FOR THE BOTTOM AND SIDE SLOPES OF THE POND.
 - INSTALL OUTLET PROTECTION.
 - STABILIZE EXPOSED SOILS WITH TEMPORARY SEED MIXTURES APPROPRIATE FOR THE POND BUFFER. ALL AREAS ABOVE THE NORMAL POOL ELEVATION SHOULD BE PERMANENTLY STABILIZED FOR HYDROSEEDING OR SEEDING OVER STRAW. SEE SHEETS CP-501 THROUGH CP-502 FOR POND PLANTING PLANS.

- MAINTENANCE PLAN
- FIRST YEAR MAINTENANCE
 - FOR THE FIRST SIX MONTHS FOLLOWING CONSTRUCTION, THE SITE SHOULD BE INSPECTED AT LEAST TWICE AFTER STORM EVENTS THAT EXCEED 1/2-INCH OF RAINFALL.
 - THE AQUATIC BENCHES SHOULD BE PLANTED WITH EMERGENT WETLAND SPECIES.
 - INSPECTORS SHOULD LOOK FOR BARE OR ERODING AREAS IN THE CONTRIBUTING DRAINAGE AREA OR AROUND THE POND BUFFER, AND MAKE SURE THEY ARE IMMEDIATELY STABILIZED WITH GRASS COVER.
 - TREES PLANTED IN THE POND BUFFER NEED TO BE WATERED DURING THE FIRST GROWING SEASON. WATER EVERY 3 DAYS FOR THE FIRST MONTH AND THEN WEEKLY THROUGH THE FIRST GROWING SEASON (APRIL-OCTOBER) DEPENDING ON RAINFALL.
 - ANNUAL MAINTENANCE/INSPECTION
 - MEASURE SEDIMENT ACCUMULATION LEVELS IN THE FORE BAY.
 - MONITOR THE GROWTH OF WETLAND PLANTS, TREES AND SHRUBS PLANTED. RECORD THE SPECIES AND THEIR APPROXIMATE COVERAGE, AND NOTE THE PRESENCE OF ANY INVASIVE SPECIES.
 - INSPECT THE CONDITION OF STORM WATER INLETS TO THE POND FOR MATERIAL DAMAGE, EROSION OR UNDERCUTTING.
 - INSPECT THE BANKS OF UPSTREAM AND DOWNSTREAM CHANNELS FOR EVIDENCE OF SLOUGHING, ANIMAL BURROWS, BOGGY AREAS, WOODY GROWTH, OR GULLY EROSION THAT MAY UNDERMINE EMBANKMENT INTEGRITY.
 - INSPECT THE POND OUTFALL CHANNEL FOR EROSION, UNDERCUTTING, RIP-RAP DISPLACEMENT, WOODY GROWTH, ETC.
 - INSPECT THE CONDITION OF THE PRINCIPAL SPILLWAY AND RISER FOR EVIDENCE OF SPALLING, JOINT FAILURE, LEAKAGE, CORROSION, ETC.
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 - INSPECT MAINTENANCE ACCESS TO ENSURE IT IS FREE OF WOODY VEGETATION, AND CHECK TO SEE WHETHER VALVES, MANHOLES AND LOCKS CAN BE OPENED AND OPERATED.
 - INSPECT INTERNAL AND EXTERNAL SIDE SLOPES OF THE POND FOR EVIDENCE OF SPARSE VEGETATIVE COVER, EROSION, OR SLUMPING AND MAKE NEEDED REPAIRS IMMEDIATELY.
- NOTE: BASED ON INSPECTION RESULTS, SPECIFIC MAINTENANCE TASKS WILL BE TRIGGERED. EXAMPLE MAINTENANCE CHECKLISTS FOR WET PONDS CAN BE ACCESSED IN APPENDIX H OF CHAPTER 8 (SECTION 8.5 P-BAS-03 SUBSECTION 7.0)) OF THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK (VSMH).

- EARTHEN EMBANKMENT NOTES
- THE EARTHEN EMBANKMENT MUST BE DESIGNED WITH CONSIDERATION GIVEN TO: SPECIFIC SITE AND FOUNDATION CONDITIONS, CONSTRUCTION MATERIAL CHARACTERISTICS, PURPOSE OF THE IMPOUNDMENT, AND HAZARD POTENTIAL ASSOCIATED WITH THE PARTICULAR SITE OR IMPOUNDMENT.
 - THE MATERIAL USED FOR THE EMBANKMENT MUST BE SUFFICIENTLY IMPERVIOUS TO PROVIDE AN ADEQUATE WATER BARRIER.
 - THE EARTHEN EMBANKMENT MUST BE DESIGNED TO BE STABLE AGAINST ANY FORCE CONDITION OR COMBINATION OF FORCE CONDITIONS THAT MAY DEVELOP DURING THE LIFE OF THE STRUCTURE.
 - CHARACTER AND DISTRIBUTION OF THE FOUNDATION MATERIAL MUST BE CONSIDERED FOR ITS SHEAR STRENGTH, COMPRESSIBILITY, AND PERMEABILITY.
 - FILL MATERIALS MUST BE SUFFICIENTLY PLASTIC TO DEFORM WITHOUT CRACKING.
 - THE MINIMUM REQUIRED DENSITY OF THE FILL MATERIAL IS 95% OF MAXIMUM.
 - GRAVEL BEDDING IS NOT ALLOWED UNDER ANY CONDUITS THROUGH THE EMBANKMENT.
 - REFER TO ECS FINAL GEOTECHNICAL REPORT FOR EMBANKMENT REQUIREMENTS.



Jacobs

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6806 PARAGON PLACE, SUITE 310, RICHMOND, VA 23230
PHONE: 804-673-8882
WWW.KIMLEY-HORN.COM



KHA PROJECT	DATE	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
113706001	11/14/2025								

STORMWATER POND
DETAILS - POND A

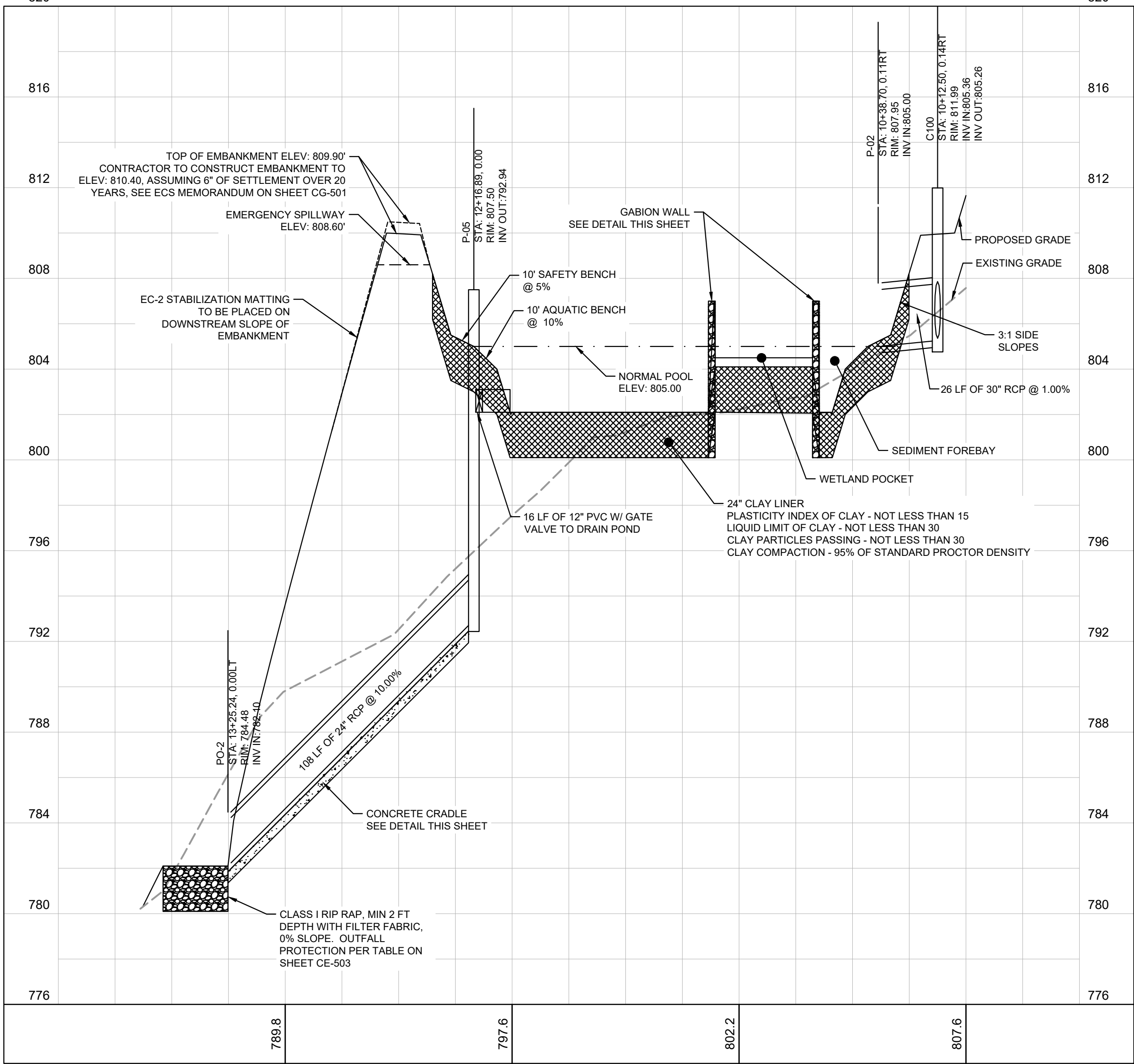
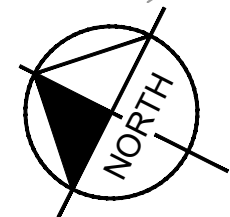
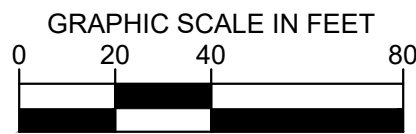
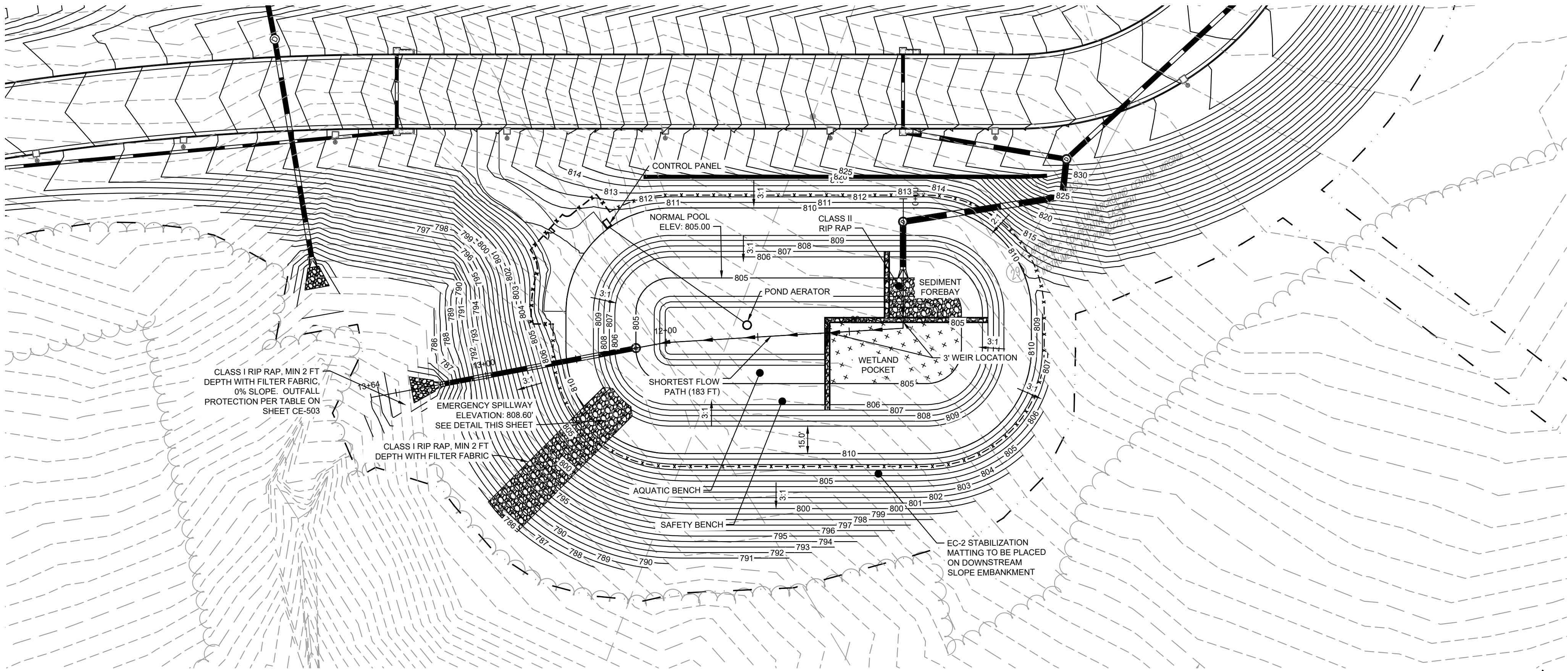
PROJECT HERCULES

VA

APPOMATTOX COUNTY

SHEET NUMBER
CG-402

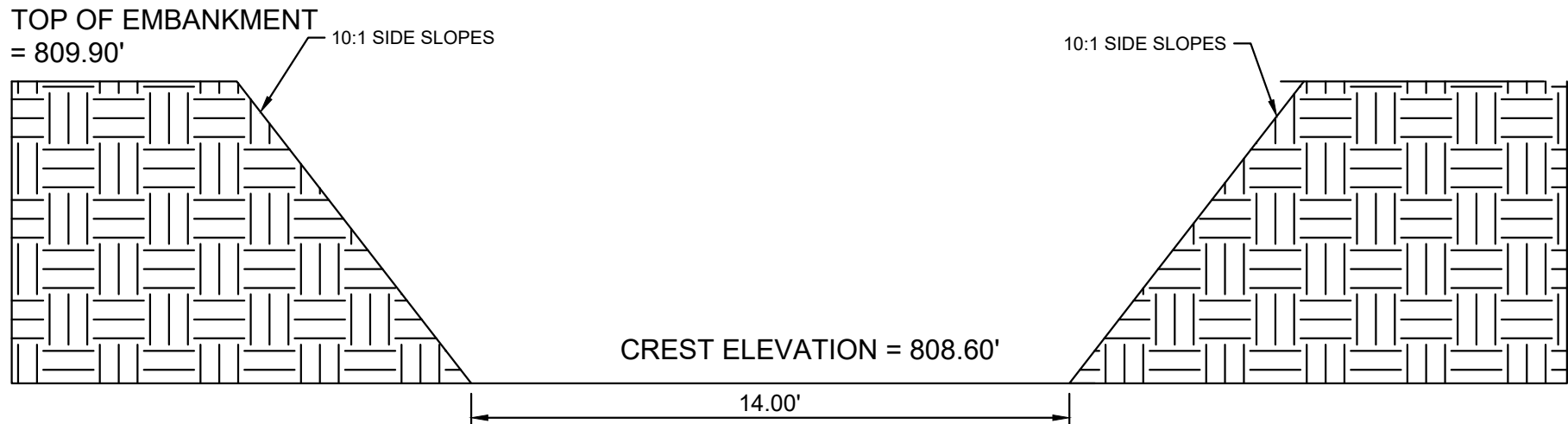
Plotted By:McGray, Stephen Sheet Set:Kha Layout:CG-403 STORMWATER POND DETAILS November 10, 2025 10:31:54am
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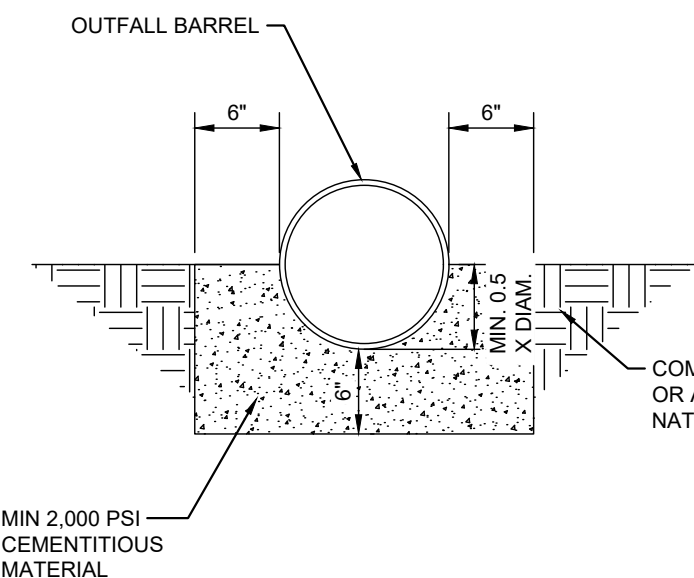
POND B - LEVEL 2 WET POND

SCALE: 1" = 40' H
1" = 4' V

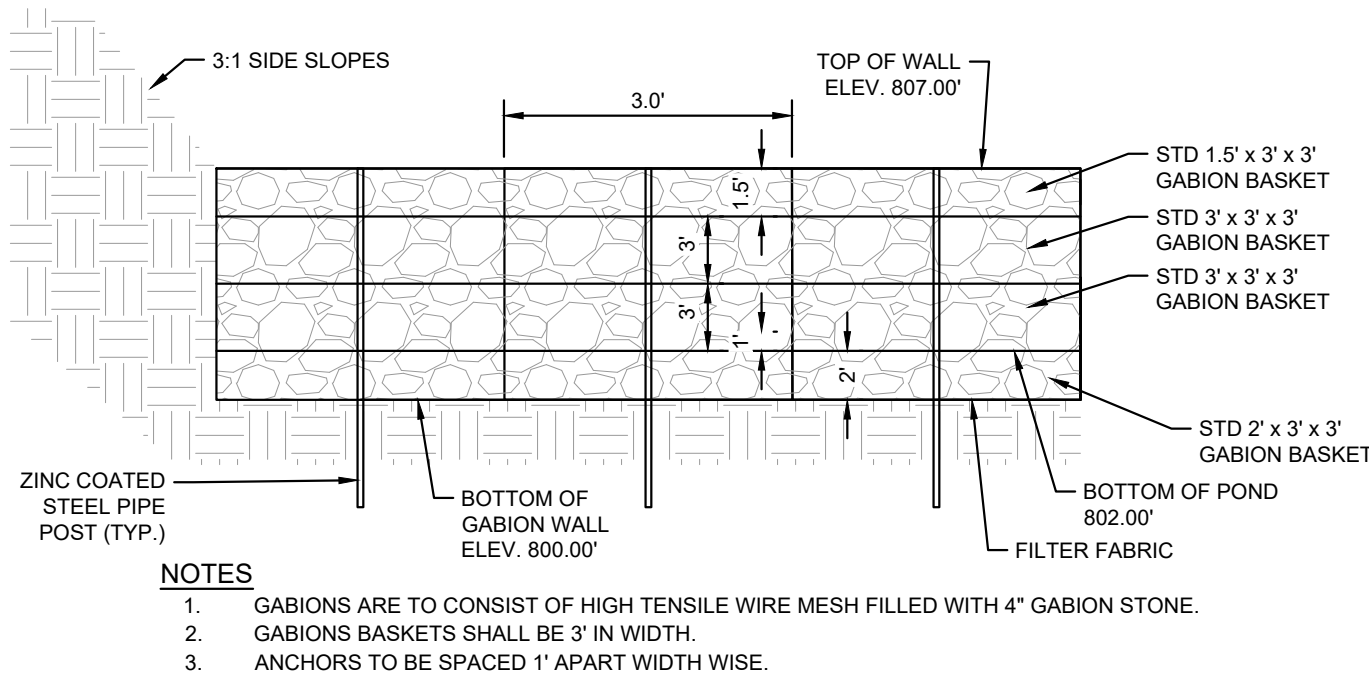
- POND AERATION NOTES**
1. LOCATION OF PUMP ENCLOSURE AND DIFFUSER ASSEMBLY SHOWN ARE APPROXIMATE.
 2. EXTENSION OF CONDUIT AND ELECTRICAL SERVICE TO BE FIELD-COORDINATED. REFER TO MANUFACTURER DETAILS ONCE AERATION SYSTEM IS SELECTED AND REVIEWED.
 3. ENGINEER RECOMMENDS "POND AERATOR, KASCO 3.3 AERATOR FOUNTAIN 480V/3P" OR SIMILAR.
 4. CONTRACTOR TO SUBMIT DESIRED AERATION SYSTEM TO ENGINEER FOR REVIEW APPROVAL PRIOR TO INSTALLATION.



1 POND EMERGENCY SPILLWAY DETAIL
N.T.S.

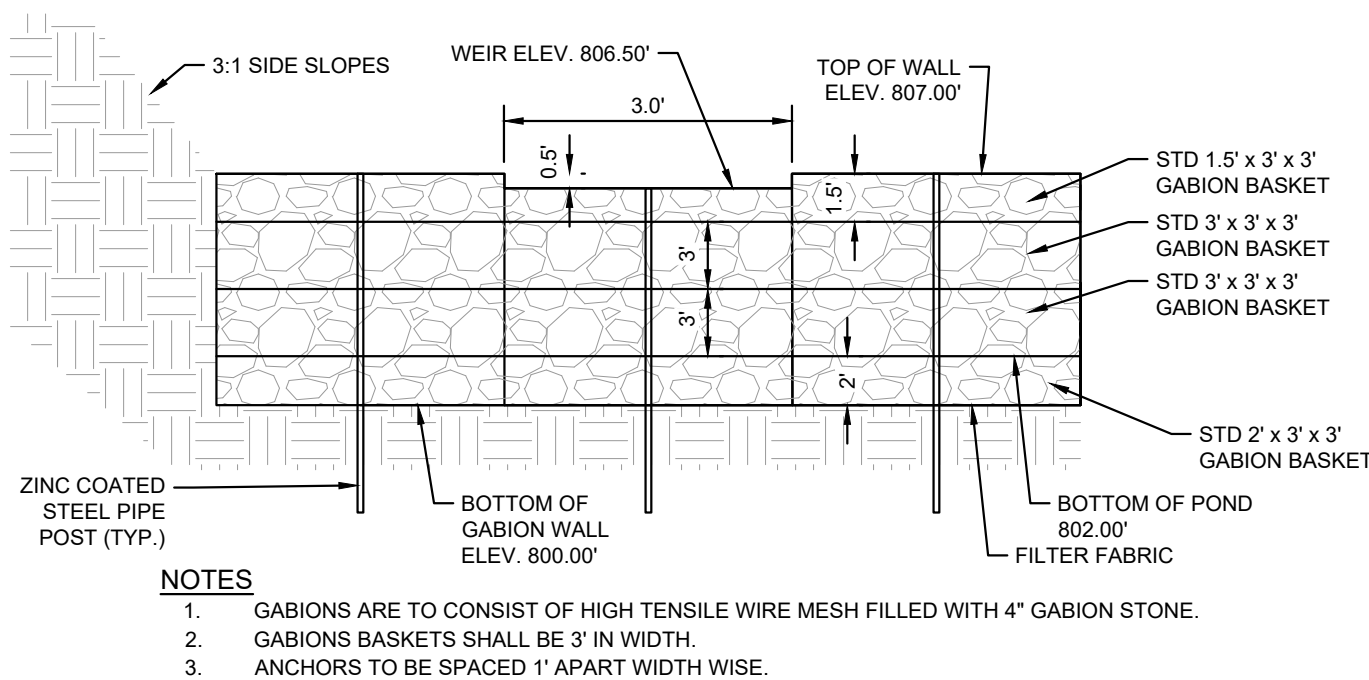


2 CONCRETE CRADLE BACKFILL DETAIL
N.T.S.



- NOTES**
1. GABIONS ARE TO CONSIST OF HIGH TENSILE WIRE MESH FILLED WITH 4" GABION STONE.
 2. GABIONS BASKETS SHALL BE 3' IN WIDTH.
 3. ANCHORS TO BE SPACED 1' APART WIDTH WISE.

3 GABION WALL DETAIL
N.T.S.



- NOTES**
1. GABIONS ARE TO CONSIST OF HIGH TENSILE WIRE MESH FILLED WITH 4" GABION STONE.
 2. GABIONS BASKETS SHALL BE 3' IN WIDTH.
 3. ANCHORS TO BE SPACED 1' APART WIDTH WISE.

4 GABION WALL (WITH WEIR) DETAIL
N.T.S.

Plotted By:McGray, Stephen Sheet Set:Kha Layout:CG-404 STORMWATER POND DETAILS November 05, 2025 04:46:37pm
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DESIGN CRITERIA

FLOW PATH	0.5 OR MORE
AQUATIC BENCH	10' @ 15% MAX
SAFETY BENCH	8-15' @ 5%
FOREBAY	15% OF TREATMENT VOLUME

WET POND B FLOW PATH

SHORTEST FLOW PATH	224
OVERALL LENGTH	224
RATIO	1

WATER SURFACE ELEVATIONS

1 YEAR:	807.12
2 YEAR:	807.53'
10 YEAR:	807.80
100 YEAR:	808.42'

FREEBOARD DEPTH REQ'D:	1.00'
FREEBOARD DEPTH PROVIDED:	1.58'

WETLANDS

TOP OF BASIN:	21,782 SF
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WETLANDS REQ'D:	2,200 SF
WETLANDS PROVIDED:	2,300 SF

POND SIZING INFORMATION

DESIGN LEVEL (1 OR 2):	2
BOTTOM POND ELEV:	802.00'
PERM. POOL ELEV:	805.00'
TREATMENT VOLUME REQ'D:	11,682 CF
TREATMENT VOLUME PROVIDED:	13,804 CF
PERMANENT POOL DEPTH:	3.0'

FOREBAY DEPTH REQ'D:	4.0'
FOREBAY DEPTH PROVIDED:	5.0'
FOREBAY VOLUME REQ'D:	1,295 CF
FOREBAY VOLUME PROVIDED:	3,781 CF

POND B SEDIMENT FOREBAY			
m	AREA (SF)	STORAGE (CF)	CUMULATIVE STORAGE (CF)
802.00	123	0	0
802.50	167	73	73
803.00	213	95	168
803.50	263	119	287
804.00	316	145	431
804.50	520	209	640
805.00	763	321	961
805.50	1366	532	1493
806.00	1470	709	2202
806.50	1578	762	2964
807.00	1689	817	3781

POND B BUOYANCY CALCULATIONS

RISER STRUCTURE

RISER INSIDE DIAMETER	5	FT
RISER INSIDE AREA	19.6	SF
RISER WALL THICKNESS	0.5	FT
RISER OUTSIDE DIAMETER	6	FT
RISER OUTSIDE AREA	28.3	SF
RISER HEIGHT	14.56	FT
RISER CONCRETE VOLUME	125.79	CF
BASE AREA	28.3	SF
BASE HEIGHT	3	FT
BASE VOLUME	84.9	CF
TOTAL CONCRETE VOLUME	210.61	CF

VOIDS

1-1.1" ORIFICE	.003	CF
1-24" CULVERT	1.57	CF
TOTAL VOIDS VOLUME	1.57	CF

TOTAL VOLUME OF CONCRETE	209.04	CF
UNIT WEIGHT OF CONCRETE	145	LB/CF
CONCRETE FORCE	30,310	LB

VOLUME OF DISPLACED WATER	285.88	CF
UNIT WEIGHT OF WATER	62.4	LB/CF
BUOYANT FORCE OF WATER	17,839	LB

SAFETY FACTOR	1.70	(MIN 1.25)
WILL IT FLOAT?		NO

WET AND DRY POND SEQUENCE OF CONSTRUCTION:

- USE OF WET POND AS AN E&S CONTROL. INSTALLATION OF THE PERMANENT RISER SHOULD BE INITIATED DURING THE CONSTRUCTION PHASE, AND DESIGN ELEVATIONS SHOULD BE SET WITH FINAL CLEANOUT OF THE SEDIMENT BASIN AND CONVERSION TO THE POST-CONSTRUCTION WET POND IN MIND. APPROPRIATE PROCEDURES SHOULD BE IMPLEMENTED TO PREVENT DISCHARGE OF TURBID WATERS WHEN THE BASIN IS BEING CONVERTED INTO A WET POND.
- STABILIZE THE DRAINAGE AREA. WET PONDS SHOULD ONLY BE CONSTRUCTED AFTER THE CONTRIBUTING DRAINAGE AREA TO THE POND IS COMPLETELY STABILIZED SINCE THE PROPOSED POND SITE WILL BE USED AS A SEDIMENT BASIN DURING THE CONSTRUCTION PHASE. THE FACILITY WILL BE DEWATERED, DREDGED AND RE-GRADED TO DESIGN DIMENSIONS AFTER THE ORIGINAL SITE CONSTRUCTION IS COMPLETE.
- ASSEMBLE CONSTRUCTION MATERIALS ON-SITE, MAKE SURE THEY MEET DESIGN SPECIFICATIONS, AND PREPARE ANY STAGING AREAS.
- INSTALL E&S CONTROLS PRIOR TO CONSTRUCTION, INCLUDING TEMPORARY DE-WATERING DEVICES AND STORMWATER DIVERSION PRACTICE. ALL AREAS SURROUNDING THE POND THAT ARE GRADED OR DENUDED DURING CONSTRUCTION MUST BE PLANTED WITH TURF GRASS, NATIVE PLANTINGS, OR OTHER APPROVED METHODS OF SOIL STABILIZATION.
- CLEAR AND STRIP THE PROJECT AREA TO THE DESIRED SUB-GRADE.
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- INSTALL THE RISER STRUCTURE AND ENSURE THE TOP INVERT OF THE OVERFLOW WEIR IS CONSTRUCTED AT THE DESIGN ELEVATION.
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- INSTALL OUTLET PROTECTION.
- STABILIZE EXPOSED SOILS WITH TEMPORARY SEED MIXTURES APPROPRIATE FOR THE POND BUFFER. ALL AREAS ABOVE THE NORMAL POOL ELEVATION SHOULD BE PERMANENTLY STABILIZED FOR HYDROSEEDING OR SEEDING OVER STRAW. SEE SHEETS CP-501 THROUGH CP-502 FOR POND PLANTING PLANS.

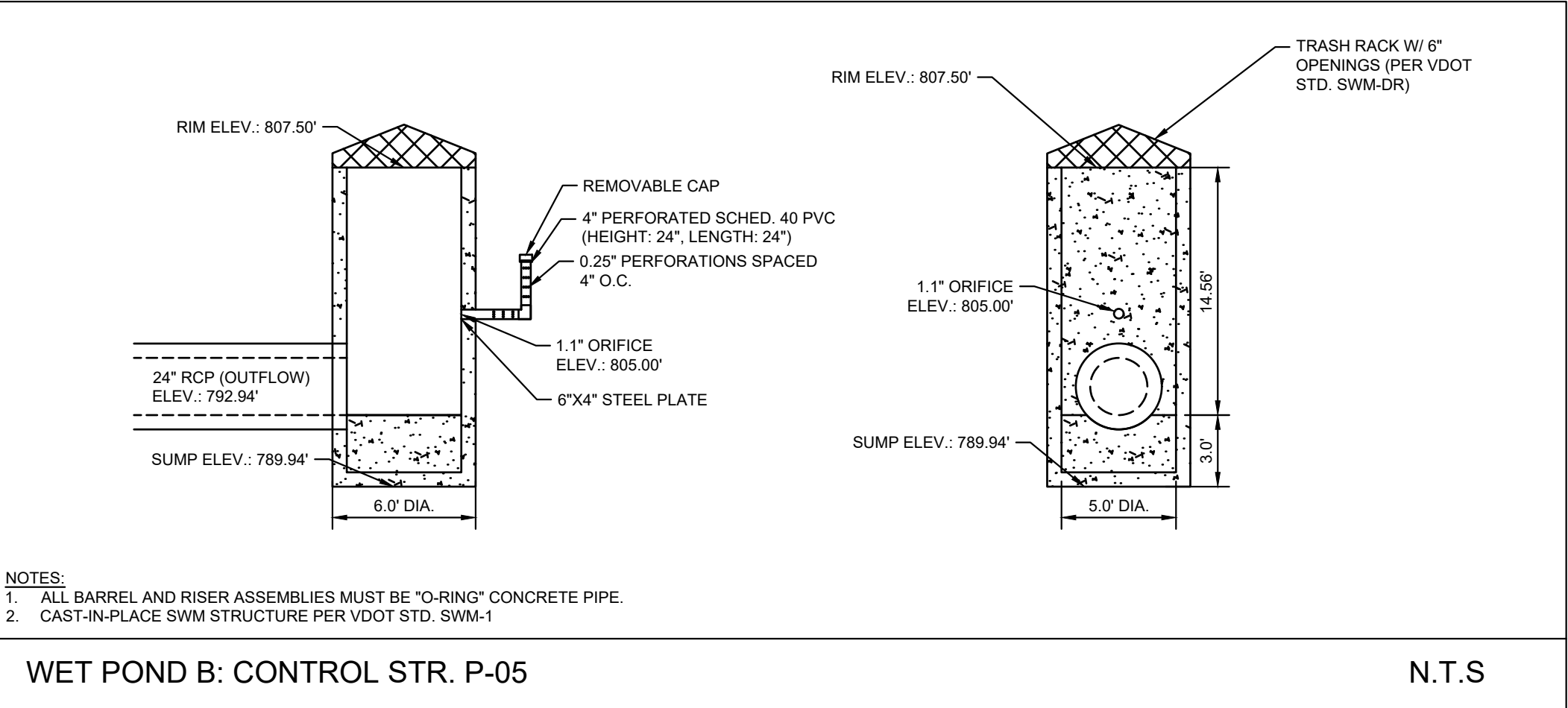
MAINTENANCE PLAN

- FIRST YEAR MAINTENANCE
 - FOR THE FIRST SIX MONTHS FOLLOWING CONSTRUCTION, THE SITE SHOULD BE INSPECTED AT LEAST TWICE AFTER STORM EVENTS THAT EXCEED 1/2-INCH OF RAINFALL.
 - THE AQUATIC BENCHES SHOULD BE PLANTED WITH EMERGENT WETLAND SPECIES.
 - INSPECTORS SHOULD LOOK FOR BARE OR ERODING AREAS IN THE CONTRIBUTING DRAINAGE AREA OR AROUND THE POND BUFFER, AND MAKE SURE THEY ARE IMMEDIATELY STABILIZED WITH GRASS COVER.
 - TREES PLANTED IN THE POND BUFFER NEED TO BE WATERED DURING THE FIRST GROWING SEASON. WATER EVERY 3 DAYS FOR THE FIRST MONTH AND THEN WEEKLY THROUGH THE FIRST GROWING SEASON (APRIL-OCTOBER) DEPENDING ON RAINFALL.
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NOTE: BASED ON INSPECTION RESULTS, SPECIFIC MAINTENANCE TASKS WILL BE TRIGGERED. EXAMPLE MAINTENANCE CHECKLISTS FOR WET PONDS CAN BE ACCESSED IN APPENDIX H OF CHAPTER 8 (SECTION 8.5 P-BAS-03 SUBSECTION 7.0)) OF THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK (VSMH).

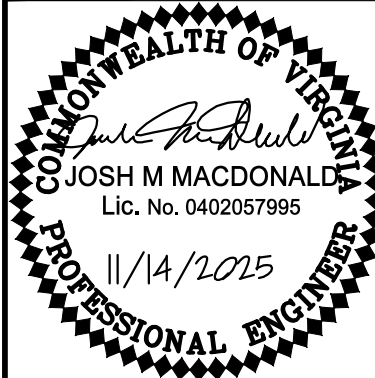
EARTHEN EMBANKMENT NOTES

- THE EARTHEN EMBANKMENT MUST BE DESIGNED WITH CONSIDERATION GIVEN TO: SPECIFIC SITE AND FOUNDATION CONDITIONS, CONSTRUCTION MATERIAL CHARACTERISTICS, PURPOSE OF THE IMPOUNDMENT, AND HAZARD POTENTIAL ASSOCIATED WITH THE PARTICULAR SITE OR IMPOUNDMENT.
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- CHARACTER AND DISTRIBUTION OF THE FOUNDATION MATERIAL MUST BE CONSIDERED FOR ITS SHEAR STRENGTH, COMPRESSIBILITY, AND PERMEABILITY.
- FILL MATERIALS MUST BE SUFFICIENTLY PLASTIC TO DEFORM WITHOUT CRACKING.
- THE MINIMUM REQUIRED DENSITY OF THE FILL MATERIAL IS 95% OF MAXIMUM.
- GRAVEL BEDDING IS NOT ALLOWED UNDER ANY CONDUITS THROUGH THE EMBANKMENT.
- REFER TO ECS FINAL GEOTECHNICAL REPORT FOR EMBANKMENT REQUIREMENTS.



Jacobs

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WWW.KIMLEY-HORN.COM



KHA PROJECT	113706001	DATE	11/11/2025	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
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STORMWATER POND
DETAILS - POND B

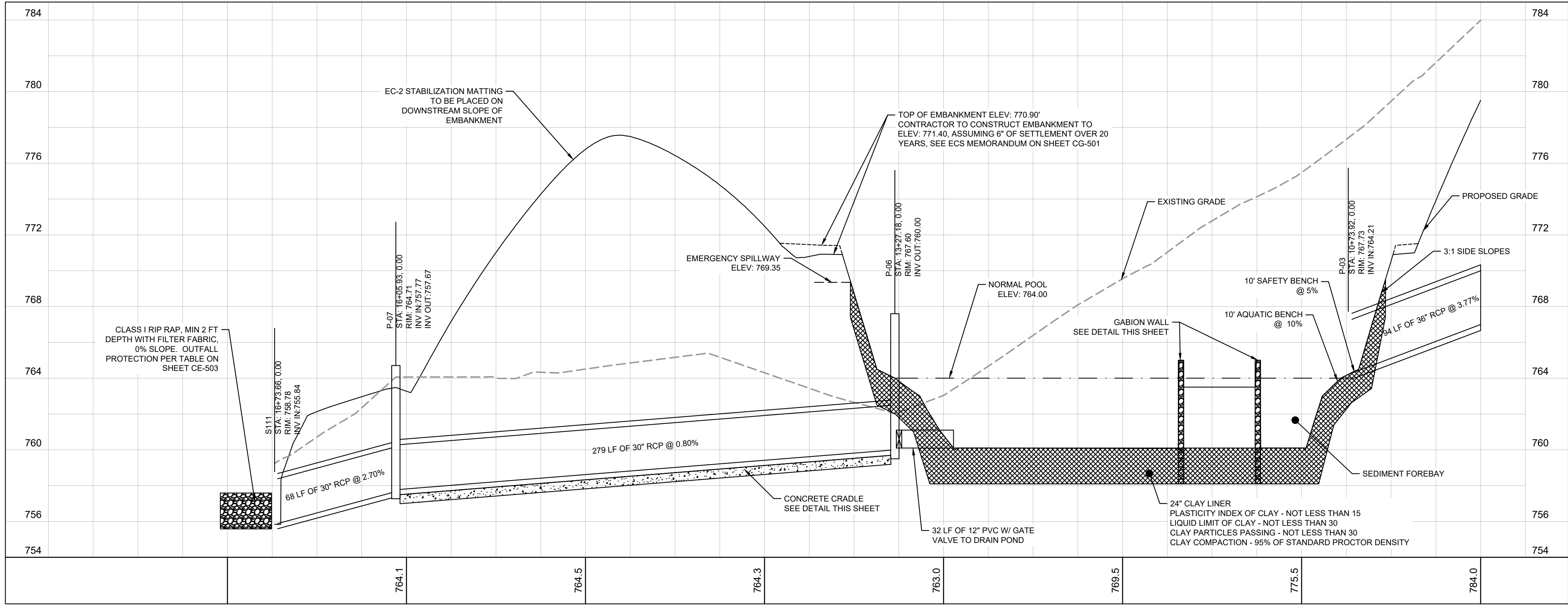
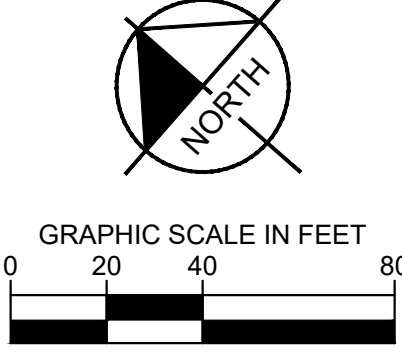
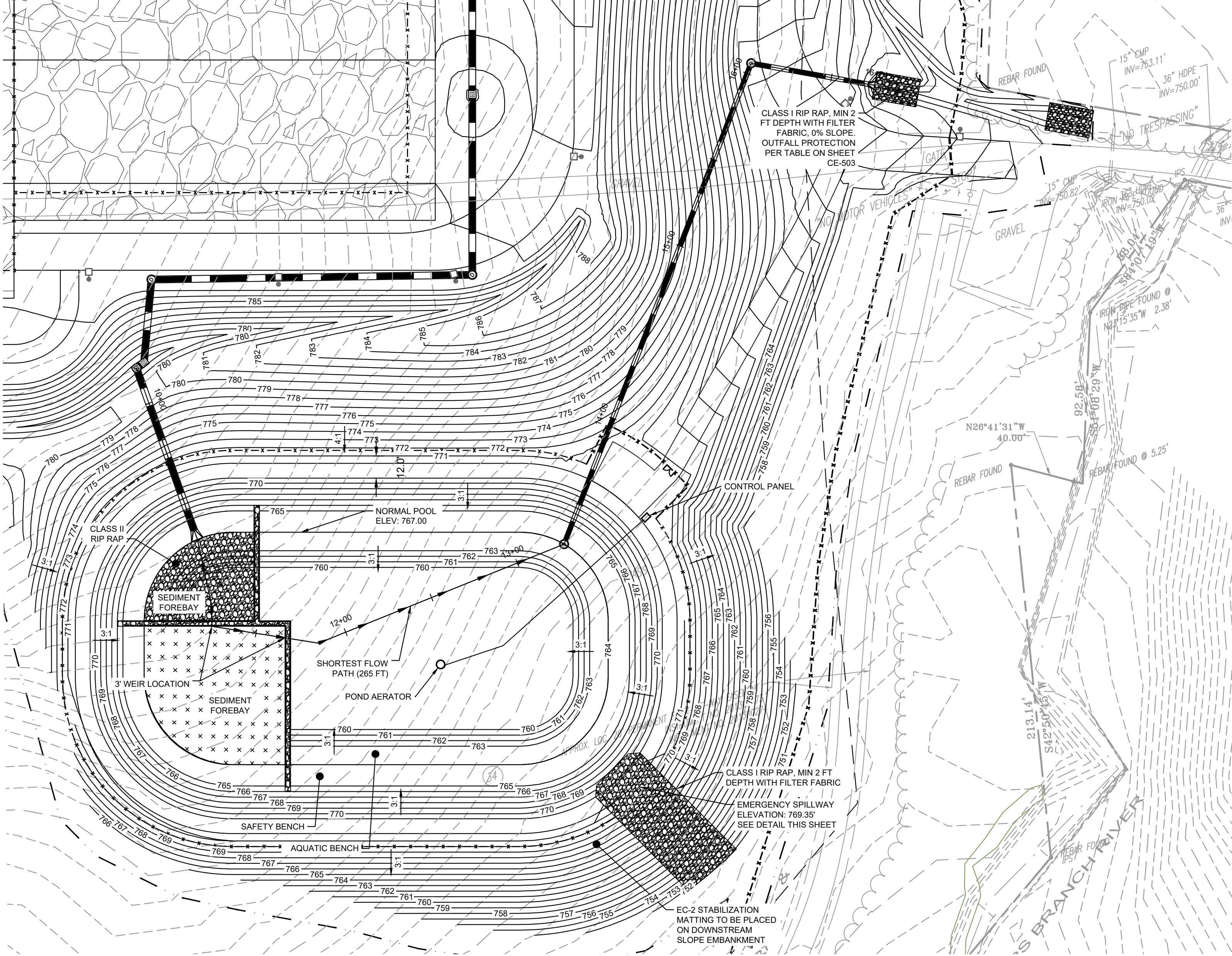
PROJECT HERCULES

APPOMATTOX COUNTY

VA

SHEET NUMBER
CG-404

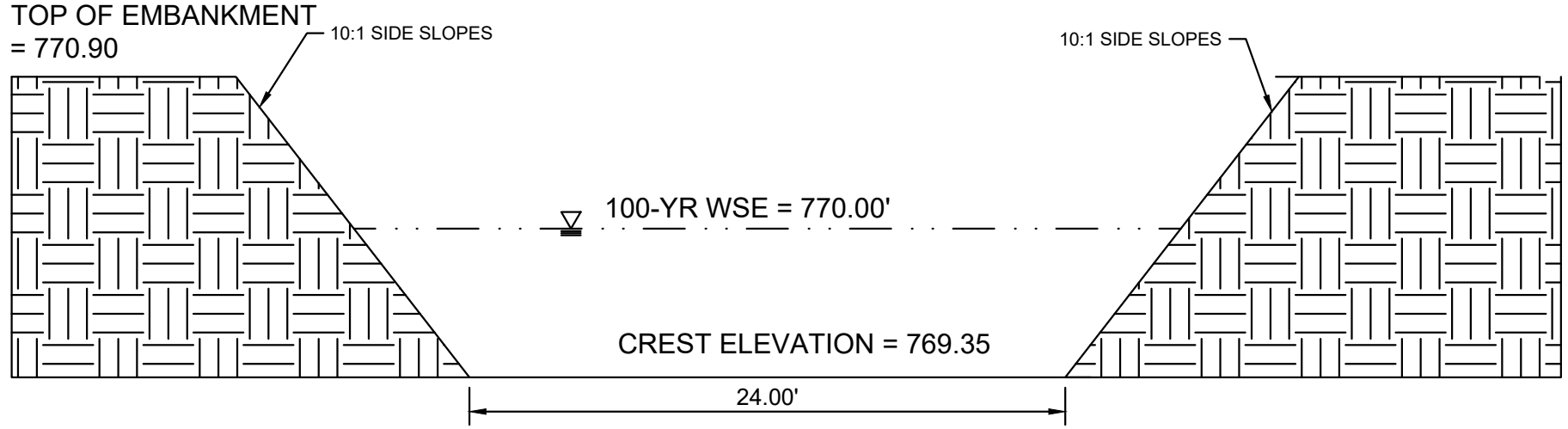
Plotted By:McGray, Stephen Sheet Set:Kha Layout:CG-405 STORMWATER POND DETAILS November 10, 2025 10:31:58am
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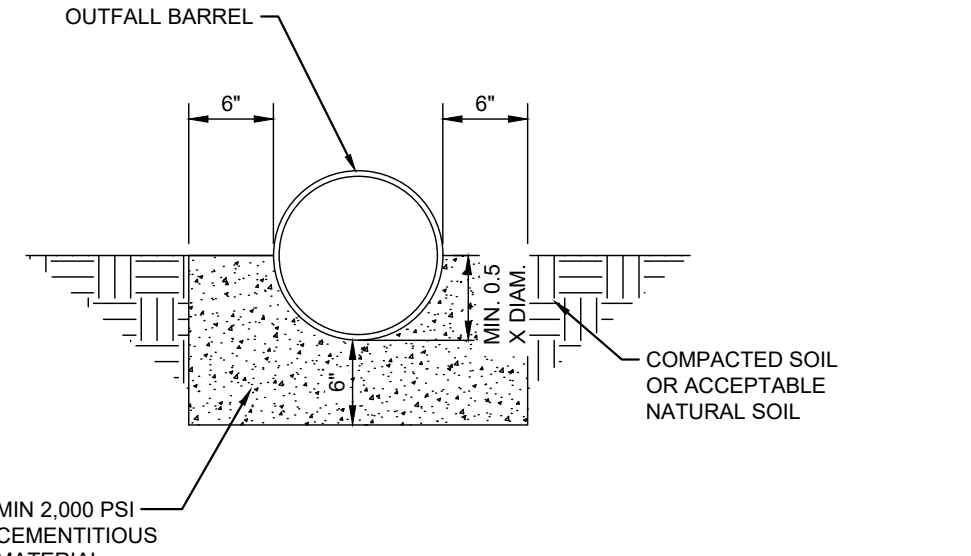
POND C - LEVEL 2 WET POND

SCALE: 1" = 40' H
1" = 4' V

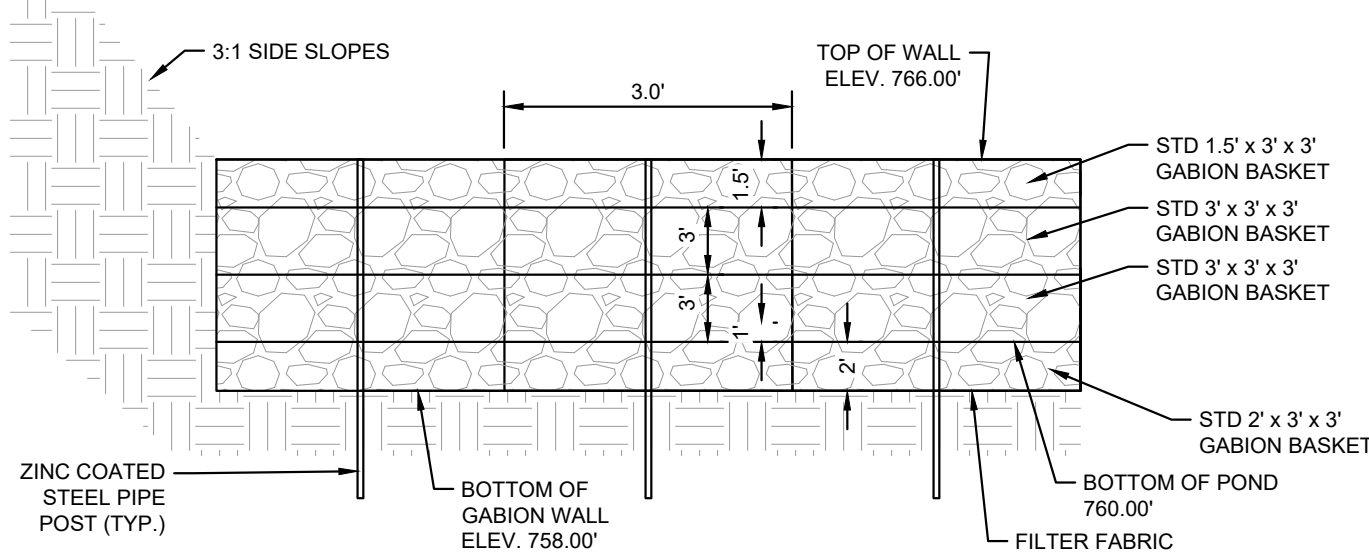
- POND AERATION NOTES**
1. LOCATION OF PUMP ENCLOSURE AND DIFFUSER ASSEMBLY SHOWN ARE APPROXIMATE.
 2. EXTENSION OF CONDUIT AND ELECTRICAL SERVICE TO BE FIELD-COORDINATED. REFER TO MANUFACTURER DETAILS ONCE AERATION SYSTEM IS SELECTED AND REVIEWED.
 3. ENGINEER RECOMMENDS "POND AERATOR, KASCO 3.3 AERATOR FOUNTAIN 480V/3P" OR SIMILAR.
 4. CONTRACTOR TO SUBMIT DESIRED AERATION SYSTEM TO ENGINEER FOR REVIEW/ APPROVAL PRIOR TO INSTALLATION.



1 POND EMERGENCY SPILLWAY DETAIL
N.T.S.

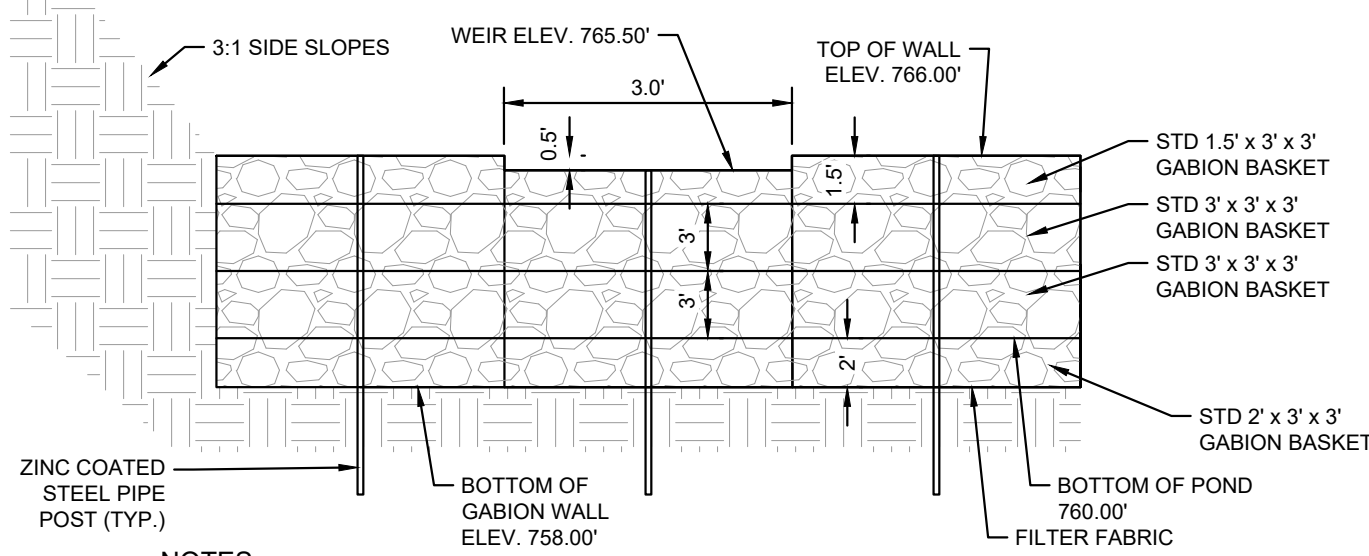


2 CONCRETE CRADLE BACKFILL DETAIL
N.T.S.



- NOTES**
1. GABIONS ARE TO CONSIST OF HIGH TENSILE WIRE MESH FILLED WITH 4" GABION STONE.
 2. GABIONS BASKETS SHALL BE 3' IN WIDTH.
 3. ANCHORS TO BE SPACED 1' APART WIDTH WISE.

3 GABION WALL DETAIL
N.T.S.



- NOTES**
1. GABIONS ARE TO CONSIST OF HIGH TENSILE WIRE MESH FILLED WITH 4" GABION STONE.
 2. GABIONS BASKETS SHALL BE 3' IN WIDTH.
 3. ANCHORS TO BE SPACED 1' APART WIDTH WISE.

4 GABION WALL (WITH WEIR) DETAIL
N.T.S.

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COMMONWEALTH OF VIRGINIA
JOSH M MACDONALD
Lic. No. 0402057995
11/14/2025
PROFESSIONAL ENGINEER

KHA PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
113706001	11/14/2025	AS SHOWN	STM	STM	JMM

STORMWATER POND
DETAILS - POND C

PROJECT HERCULES

VA

APPOMATTOX COUNTY

SHEET NUMBER
CG-405

Plotted By:McGray, Stephen Sheet Set:Kha Layout:CG-406 STORMWATER POND DETAILS November 05, 2025 04:45:49pm
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DESIGN CRITERIA	
FLOW PATH	0.5 OR MORE
AQUATIC BENCH	10' @ 15% MAX
SAFETY BENCH	8-15' @ 5%
WETLANDS	10% OF TOP BASIN
FOREBAY	15% OF TREATMENT VOLUME

WET POND C FLOW PATH	
SHORTEST FLOW PATH	309
OVERALL LENGTH	309
RATIO	1

WATER SURFACE ELEVATIONS

1 YEAR:	767.00'
2 YEAR:	767.66'
10 YEAR:	768.31'
100 YEAR:	769.98'

FREEBOARD DEPTH REQ'D:	1.00'
FREEBOARD DEPTH PROVIDED:	1.02'

WETLANDS

TOP OF BASIN:	51,767 SF
---------------	-----------

WETLANDS REQ'D:	5,177 SF
WETLANDS PROVIDED:	5,200 SF

POND SIZING INFORMATION

DESIGN LEVEL (1 OR 2):	2
BOTTOM POND ELEV:	760.00'
PERM. POOL ELEV:	764.00'
TREATMENT VOLUME REQ'D:	52,891 CF
TREATMENT VOLUME PROVIDED:	72,062 CF
PERMANENT POOL DEPTH:	4.0'

FOREBAY DEPTH REQ'D:	4'
FOREBAY DEPTH PROVIDED:	6.0'
FOREBAY VOLUME REQ'D:	6,024 CF
FOREBAY VOLUME PROVIDED:	12,407 CF

POND C SEDIMENT FOREBAY			
ELEV.	AREA (SF)	STORAGE (CF)	CUMULATIVE STORAGE (CF)
760.00	982	0	0
760.50	1069	513	513
761.00	1159	557	1070
761.50	1253	603	1673
762.00	1350	651	2342
762.50	1451	700	3024
763.00	1556	752	3776
763.50	1930	872	4647
764.00	2343	1068	5715
764.50	3287	1408	7123
765.00	3442	1682	8805
765.50	3601	1761	10566
766.00	3763	1841	12407

POND C BUOYANCY CALCULATIONS		
RISER STRUCTURE		
RISER INSIDE DIAMETER	5	FT
RISER INSIDE AREA	19.6	SF
RISER WALL THICKNESS	0.5	FT
RISER OUTSIDE DIAMETER	6	FT
RISER OUTSIDE AREA	28.3	SF
RISER HEIGHT	7.30	FT
RISER CONCRETE VOLUME	63.07	CF
BASE AREA	28.3	SF
BASE HEIGHT	3	FT
BASE VOLUME	84.9	CF
TOTAL CONCRETE VOLUME	147.89	CF

VOIDS		
1-5.2" ORIFICE	0.05	CF
1-24" CULVERT	1.57	CF
TOTAL VOIDS VOLUME	1.62	CF

TOTAL VOLUME OF CONCRETE	146.27	CF
UNIT WEIGHT OF CONCRETE	145	LB/CF
CONCRETE FORCE	21,208	LB

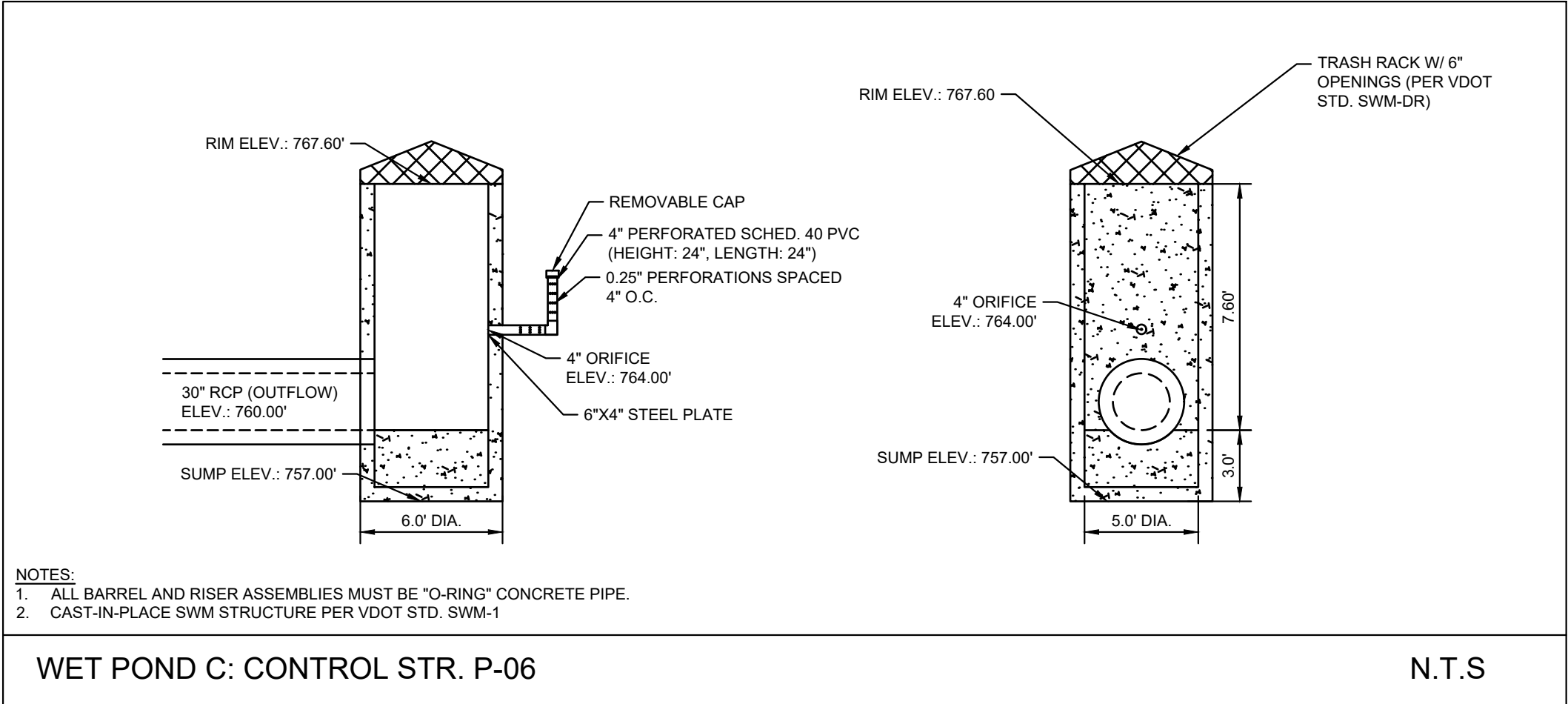
VOLUME OF DISPLACED WATER	143.34	CF
UNIT WEIGHT OF WATER	62.4	LB/CF
BUOYANT FORCE OF WATER	8,944	LB

SAFETY FACTOR	2.37	(MIN 1.25)
WILL IT FLOAT?	NO	

- WET AND DRY POND SEQUENCE OF CONSTRUCTION:
- USE OF WET POND AS AN E&S CONTROL. INSTALLATION OF THE PERMANENT RISER SHOULD BE INITIATED DURING THE CONSTRUCTION PHASE, AND DESIGN ELEVATIONS SHOULD BE SET WITH FINAL CLEANOUT OF THE SEDIMENT BASIN AND CONVERSION TO THE POST-CONSTRUCTION WET POND IN MIND. APPROPRIATE PROCEDURES SHOULD BE IMPLEMENTED TO PREVENT DISCHARGE OF TURBID WATERS WHEN THE BASIN IS BEING CONVERTED INTO A WET POND.
 - STABILIZE THE DRAINAGE AREA. WET PONDS SHOULD ONLY BE CONSTRUCTED AFTER THE CONTRIBUTING DRAINAGE AREA TO THE POND IS COMPLETELY STABILIZED SINCE THE PROPOSED POND SITE WILL BE USED AS A SEDIMENT BASIN DURING THE CONSTRUCTION PHASE. THE FACILITY WILL BE DEWATERED, DREDGED AND RE-GRADED TO DESIGN DIMENSIONS AFTER THE ORIGINAL SITE CONSTRUCTION IS COMPLETE.
 - ASSEMBLE CONSTRUCTION MATERIALS ON-SITE, MAKE SURE THEY MEET DESIGN SPECIFICATIONS, AND PREPARE ANY STAGING AREAS.
 - INSTALL E&S CONTROLS PRIOR TO CONSTRUCTION, INCLUDING TEMPORARY DE-WATERING DEVICES AND STORMWATER DIVERSION PRACTICE. ALL AREAS SURROUNDING THE POND THAT ARE GRADED OR DENUDED DURING CONSTRUCTION MUST BE PLANTED WITH TURF GRASS, NATIVE PLANTINGS, OR OTHER APPROVED METHODS OF SOIL STABILIZATION.
 - CLEAR AND STRIP THE PROJECT AREA TO THE DESIRED SUB-GRADE.
 - EXCAVATE THE CORE TRENCH AND INSTALL THE SPILLWAY PIPE.
 - INSTALL THE RISER STRUCTURE AND ENSURE THE TOP INVERT OF THE OVERFLOW WEIR IS CONSTRUCTED AT THE DESIGN ELEVATION.
 - CONSTRUCT THE EMBANKMENT AND ANY INTERNAL BERMS IN 8-12 INCH LIFTS, OR AS DIRECTED BY GEOTECHNICAL RECOMMENDATIONS, AND COMPACT AS REQUIRED WITH APPROPRIATE EQUIPMENT.
 - EXCAVATE/GRADE UNTIL THE APPROPRIATE ELEVATION AND DESIRED CONTOURS ARE ACHIEVED FOR THE BOTTOM AND SIDE SLOPES OF THE POND.
 - INSTALL OUTLET PROTECTION.
 - STABILIZE EXPOSED SOILS WITH TEMPORARY SEED MIXTURES APPROPRIATE FOR THE POND BUFFER. ALL AREAS ABOVE THE NORMAL POOL ELEVATION SHOULD BE PERMANENTLY STABILIZED FOR HYDROSEEDING OR SEEDING OVER STRAW. SEE SHEETS CP-501 THROUGH CP-502 FOR POND PLANTING PLANS.

- MAINTENANCE PLAN
- FIRST YEAR MAINTENANCE
 - FOR THE FIRST SIX MONTHS FOLLOWING CONSTRUCTION, THE SITE SHOULD BE INSPECTED AT LEAST TWICE AFTER STORM EVENTS THAT EXCEED 1/2-INCH OF RAINFALL.
 - THE AQUATIC BENCHES SHOULD BE PLANTED WITH EMERGENT WETLAND SPECIES.
 - INSPECTORS SHOULD LOOK FOR BARE OR ERODING AREAS IN THE CONTRIBUTING DRAINAGE AREA OR AROUND THE POND BUFFER, AND MAKE SURE THEY ARE IMMEDIATELY STABILIZED WITH GRASS COVER.
 - TREES PLANTED IN THE POND BUFFER NEED TO BE WATERED DURING THE FIRST GROWING SEASON. WATER EVERY 3 DAYS FOR THE FIRST MONTH AND THEN WEEKLY THROUGH THE FIRST GROWING SEASON (APRIL-OCTOBER) DEPENDING ON RAINFALL.
 - ANNUAL MAINTENANCE/INSPECTION
 - MEASURE SEDIMENT ACCUMULATION LEVELS IN THE FORE BAY.
 - MONITOR THE GROWTH OF WETLAND PLANTS, TREES AND SHRUBS PLANTED. RECORD THE SPECIES AND THEIR APPROXIMATE COVERAGE, AND NOTE THE PRESENCE OF ANY INVASIVE SPECIES.
 - INSPECT THE CONDITION OF STORM WATER INLETS TO THE POND FOR MATERIAL DAMAGE, EROSION OR UNDERCUTTING.
 - INSPECT THE BANKS OF UPSTREAM AND DOWNSTREAM CHANNELS FOR EVIDENCE OF SLOUGHING, ANIMAL BURROWS, BOGGY AREAS, WOODY GROWTH, OR GULLY EROSION THAT MAY UNDERMINE EMBANKMENT INTEGRITY.
 - INSPECT THE POND OUTFALL CHANNEL FOR EROSION, UNDERCUTTING, RIP-RAP DISPLACEMENT, WOODY GROWTH, ETC.
 - INSPECT THE CONDITION OF THE PRINCIPAL SPILLWAY AND RISER FOR EVIDENCE OF SPALLING, JOINT FAILURE, LEAKAGE, CORROSION, ETC.
 - INSPECT THE CONDITION OF ALL TRASH RACKS, REVERSE-SLOPED PIPES, OR FLASHBOARD RISERS FOR EVIDENCE OF CLOGGING, LEAKAGE, DEBRIS ACCUMULATION, ETC.
 - INSPECT MAINTENANCE ACCESS TO ENSURE IT IS FREE OF WOODY VEGETATION, AND CHECK TO SEE WHETHER VALVES, MANHOLES AND LOCKS CAN BE OPENED AND OPERATED.
 - INSPECT INTERNAL AND EXTERNAL SIDE SLOPES OF THE POND FOR EVIDENCE OF SPARSE VEGETATIVE COVER, EROSION, OR SLUMPING AND MAKE NEEDED REPAIRS IMMEDIATELY.
- NOTE: BASED ON INSPECTION RESULTS, SPECIFIC MAINTENANCE TASKS WILL BE TRIGGERED. EXAMPLE MAINTENANCE CHECKLISTS FOR WET PONDS CAN BE ACCESSED IN APPENDIX H OF CHAPTER 8 (SECTION 8.5 P-BAS-03 SUBSECTION 7.0)) OF THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK (VSMH).

- EARTHEN EMBANKMENT NOTES
- THE EARTHEN EMBANKMENT MUST BE DESIGNED WITH CONSIDERATION GIVEN TO: SPECIFIC SITE AND FOUNDATION CONDITIONS, CONSTRUCTION MATERIAL CHARACTERISTICS, PURPOSE OF THE IMPOUNDMENT, AND HAZARD POTENTIAL ASSOCIATED WITH THE PARTICULAR SITE OR IMPOUNDMENT.
 - THE MATERIAL USED FOR THE EMBANKMENT MUST BE SUFFICIENTLY IMPERVIOUS TO PROVIDE AN ADEQUATE WATER BARRIER.
 - THE EARTHEN EMBANKMENT MUST BE DESIGNED TO BE STABLE AGAINST ANY FORCE CONDITION OR COMBINATION OF FORCE CONDITIONS THAT MAY DEVELOP DURING THE LIFE OF THE STRUCTURE.
 - CHARACTER AND DISTRIBUTION OF THE FOUNDATION MATERIAL MUST BE CONSIDERED FOR ITS SHEAR STRENGTH, COMPRESSIBILITY, AND PERMEABILITY.
 - FILL MATERIALS MUST BE SUFFICIENTLY PLASTIC TO DEFORM WITHOUT CRACKING.
 - THE MINIMUM REQUIRED DENSITY OF THE FILL MATERIAL IS 95% OF MAXIMUM.
 - GRAVEL BEDDING IS NOT ALLOWED UNDER ANY CONDUITS THROUGH THE EMBANKMENT.
 - REFER TO ECS FINAL GEOTECHNICAL REPORT FOR EMBANKMENT REQUIREMENTS.



Jacobs

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KHA PROJECT	DATE	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
113706001	11/11/2025								

STORMWATER POND
DETAILS - POND C

PROJECT HERCULES

APPOMATTOX COUNTY

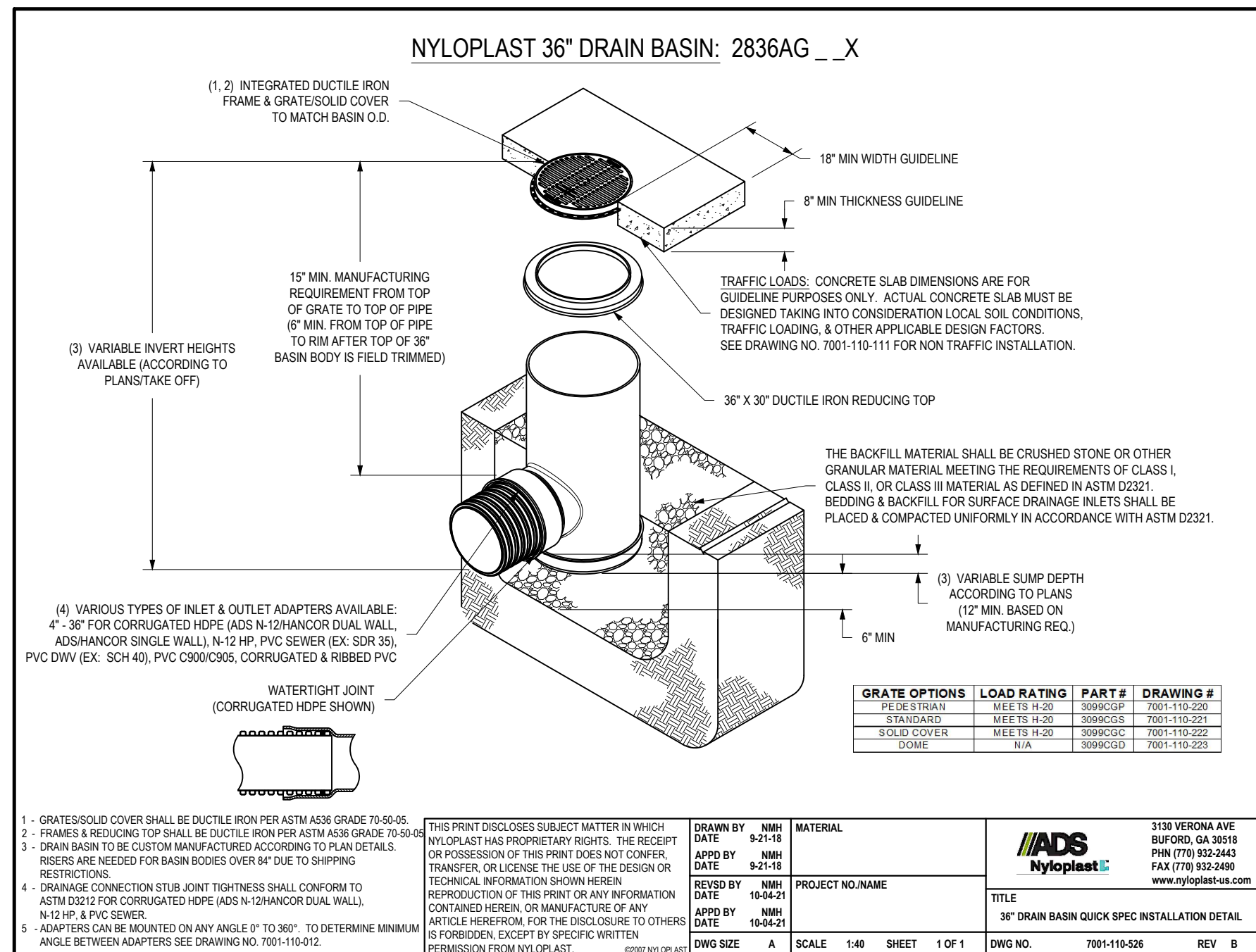
VA

SHEET NUMBER
CG-406

STRUCTURE TABLE			
STRUCTURE NAME	DESCRIPTION	RIM	HEIGHT
A100	VDOT STD. MH-1 (D=48") WITH SAFETY BENCH	736.57	19.65
A101	VDOT STD. DI-3B (L=8') WITH SAFETY BENCH	758.59	22.67
A103	VDOT STD. DI-3C (L=6') WITH SAFETY BENCH	757.64	14.62
A104	VDOT STD. DI-3B (L=6') WITH SAFETY BENCH	758.50	14.54
A105	VDOT STD. DI-3B (L=8') WITH SAFETY BENCH	757.20	10.95
A106	VDOT STD. DI-3B (L=8')	754.56	7.41
A106A	VDOT STD MH-1	755.25	6.71
A107	VDOT STD. DI-3C (L=20')	753.65	5.81
A108	VDOT STD. DI-3B (L=6')	755.76	5.88
A109	VDOT STD. DI-3B (L=6')	758.22	5.93
A110	VDOT STD. DI-3B (L=8')	758.57	5.54
AR100	24" BEND		
AR101	24" BEND		
AR102	DBH/HVF-24S-800 FILTER		
AR103	VDOT STD MH-1 (D=48")	756.56	7.60
AR104	36" NYLOPLAST DRAIN BASIN W/ 24" PEDESTRIAN GRATE (TRAFFIC RATED)	759.90	10.23
AR105	36" NYLOPLAST DRAIN BASIN W/ 24" PEDESTRIAN GRATE (TRAFFIC RATED)	759.90	9.59
AR106	36" NYLOPLAST DRAIN BASIN W/ 24" PEDESTRIAN GRATE (TRAFFIC RATED)	759.90	8.95
AR107	36" NYLOPLAST DRAIN BASIN W/ 24" PEDESTRIAN GRATE (TRAFFIC RATED)	759.90	8.31
AR108	36" NYLOPLAST DRAIN BASIN W/ 24" PEDESTRIAN GRATE (TRAFFIC RATED)	759.90	7.76

STRUCTURE TABLE			
STRUCTURE NAME	DESCRIPTION	RIM	HEIGHT
AR109	36" NYLOPLAST DRAIN BASIN W/ 24" PEDESTRIAN GRATE (TRAFFIC RATED)	759.90	7.12
AR110	36" NYLOPLAST DRAIN BASIN W/ 24" PEDESTRIAN GRATE (TRAFFIC RATED)	759.90	6.48
AR111	36" NYLOPLAST DRAIN BASIN W/ 24" PEDESTRIAN GRATE (TRAFFIC RATED)	759.90	6.00
B101	VDOT STD. DI-3B (L=6') WITH SAFETY BENCH	757.37	17.35
B102	VDOT STD. MH-1 (D=48") WITH SAFETY BENCH	752.40	10.45
B104-1	VDOT STD. DI-3B (L=10')	752.28	9.89
B104-2	VDOT STD. DI-3C (L=10')	752.16	9.62
B104-3	VDOT STD. DI-3B (L=10')	752.38	9.66
B106	VDOT STD. DI-3B (L=14') WITH SAFETY BENCH	754.42	10.94
B107	VDOT STD. DI-3A (L=6') WITH SAFETY BENCH	756.67	12.35
B108	VDOT STD. DI-3B (L=16')	754.42	9.16
B109-1	VDOT STD DI-3B (L=12')	752.40	6.04
B109-2	VDOT STD. DI-3C (L=12')	752.18	5.76
B109-3	VDOT STD DI-3B (L=12')	752.40	5.82
B110	VDOT STD. DI-3B (L=16')	753.53	6.58
B110A	VDOT STD. DI-3B (L=10')	758.95	7.50
B110B	VDOT STD. DI-3B (L=6')	759.08	4.74
B111	VDOT STD. DI-3B (L=10')	757.20	5.62
B111A	VDOT STD. DI-3B (L=10')	758.00	4.43
B112	VDOT STD. DI-3B (L=10') WITH SAFETY BENCH	767.76	7.86

STRUCTURE TABLE			
STRUCTURE NAME	DESCRIPTION	RIM	HEIGHT
B112A	VDOT STD. DI-3B (L=10')	768.45	4.95
B113	VDOT STD. DI-3B (L=10') WITH SAFETY BENCH	784.05	6.01
B113A	VDOT STD. DI-3B (L=10')	784.05	3.57
B113M	VDOT STD. MH-1 (D=48")	780.54	13.42
B114	VDOT STD. DI-3B (L=6')	792.72	5.81
B114A	VDOT STD. DI-3B (L=6')	792.75	4.87
B115	VDOT STD. DI-3B (L=8')	797.25	6.70
B115A	VDOT STD. DI-3B (L=8')	797.25	5.16
B116	VDOT STD. DI-3B (L=10')	807.30	9.40
B117	VDOT STD. DI-3B (L=10')	807.30	4.42
C100	VDOT STD. MH-1	811.99	6.73
C101	VDOT STD. MH-1 WITH SAFETY BENCH	825.02	17.56
C102	VDOT STD. MH-1 WITH SAFETY BENCH	832.44	11.80
C102A	VDOT STD. DI-3B (L=10')	827.53	4.49
C102B	VDOT STD. DI-3B (L=10')	827.67	3.84
C103	VDOT STD. MH-1 (D=48")	836.93	8.33
C103A	VDOT STD. DI-3B (L=6')	837.23	4.24
C104	VDOT STD. DI-3B (L=6')	837.72	4.12
C104A	VDOT STD. DI-3C (L=12')	835.17	8.77
C104B	VDOT STD. DI-3B (L=6')	839.33	5.34



STRUCTURE TABLE			
STRUCTURE NAME	DESCRIPTION	RIM	HEIGHT
C105	VDOT STD. DI-38 (L=8)	838.32	5.60
C105A	VDOT STD. DI-38 (L=8)	838.60	6.65
C106	VDOT STD. DI-38 (L=8)	840.76	6.89
C106A	VDOT STD. DI-38 (L=8)	840.85	4.30
C107	VDOT STD. DI-38 (L=8)	840.70	5.51
CU100	VDOT STD. ES-1	773.17	2.27
CU101	VDOT STD. MH-1 (D=48")	773.80	3.28
CU102	VDOT STD. ES-1	768.16	3.08
CU200	VDOT STD. ES-1	800.35	???
CU201	VDOT STD. MH-1	803.72	7.77
CU202	VDOT STD. ES-1	787.68	3.08
P-01	VDOT STD. ES-1	714.35	2.70
P-02	VDOT STD. ES-1	807.95	6.62
P-03	VDOT STD. ES-1	767.73	6.08
P-04	VDOT STD. MH-1 (D=48")	713.50	6.50
P-05	VDOT STD. MH-1 (D=48")	807.50	14.56
P-06	VDOT STD. MH-1 (D=48")	767.60	7.60
P-07	VDOT STD. MH-1	764.71	6.94
PO-01	VDOT STD. ES-1	708.68	6.08
PO-02	VDOT STD. MH-1 (D=48")	711.71	5.72

STRUCTURE TABLE			
STRUCTURE NAME	DESCRIPTION	RIM	HEIGHT
PO-2	VDOT STD. ES-1	784.48	???
R102	VDOT STD. MH-1 (D=48") WITH SAFETY BENCH	760.85	13.10
R102A	VDOT STD. MH-1 (D=48") WITH SAFETY BENCH	760.85	11.31
R102B	VDOT STD. MH-1 (D=48") WITH SAFETY BENCH		
RAIN 1	RAIN HARVEST		
RAIN 2	RAIN HARVEST	750.94	???
S101-1	VDOT STD. DI-5	777.26	9.50
S101-2	VDOT STD. DI-5	777.40	9.54
S102	VDOT STD. MH-1 (D=48") WITH SAFETY BENCH	787.29	16.40
S103	VDOT STD. MH-1 (D=48") WITH SAFETY BENCH	787.59	15.57
S104	VDOT STD. DI-1 WITH SAFETY BENCH	786.90	14.19
S105	VDOT STD. DI-1 WITH SAFETY BENCH	789.20	15.47
S106	VDOT STD. DI-1 WITH SAFETY BENCH	787.80	12.88
S107	VDOT STD. MH-1 (D=48") WITH SAFETY BENCH	789.34	13.47
S108	VDOT STD. DI-5	786.41	9.64
S109	VDOT STD. DI-5	786.63	8.36
S110	VDOT STD. DI-5		
S111	VDOT STD. ES-1	758.78	6.08

STORM PIPES					
PIPE SEGMENT	LENGTH	DESCRIPTION	SLOPE	INV. (IN)	INV. (OUT)
A100 TO P-01	110 LF	30" RCP	5.00%	716.92	711.41
A101 TO A100	110 LF	30" RCP	5.00%	735.92	730.40
A103 TO A101	70 LF	30" RCP	0.80%	743.31	742.89
A104 TO A103	141 LF	30" RCP	0.80%	744.25	743.41
A105 TO A104	365 LF	30" RCP	0.80%	746.54	744.35
A106 TO A105	133 LF	30" RCP	0.80%	747.44	746.64
A106A TO A106	57 LF	24" RCP	1.05%	748.54	747.94
A107 TO A106	32 LF	18" RCP	0.80%	748.13	747.94
A108 TO A107	103 LF	15" RCP	1.08%	750.08	748.98
A109 TO A108	110 LF	15" RCP	2.11%	752.50	750.18
A110 TO A109	22 LF	15" RCP	2.77%	753.22	752.60
AR100 TO A106A	10 LF	24" HDPE	0.50%	750.53	750.48
AR101 TO AR100	60 LF	24" HDPE	0.50%	750.83	750.53
AR102 TO AR101	34 LF	24" HDPE	0.50%	751.00	750.83
AR102 TO RAIN 1	7 LF	24" HDPE	0.00%	748.76	748.76
AR103 TO AR102	12 LF	24" HDPE	0.75%	748.96	748.87
AR104 TO AR103	95 LF	24" HDPE	0.75%	749.67	748.96
AR105 TO AR104	72 LF	24" HDPE	0.75%	750.31	749.77

PIPE SEGMENT	LENGTH	DESCRIPTION	SLOPE	INV. (IN)	INV. (OUT)
AR106 TO AR105	72 LF	24" HDPE	0.75%	750.95	750.41
AR107 TO AR106	72 LF	24" HDPE	0.75%	751.59	751.05
AR108 TO AR107	80 LF	24" HDPE	0.75%	752.14	751.69
AR109 TO AR108	72 LF	24" HDPE	0.75%	752.78	752.24
AR110 TO AR109	72 LF	24" HDPE	0.75%	753.42	752.88
AR111 TO AR110	50 LF	24" HDPE	0.75%	753.90	753.52
B101 TO A101	364 LF	36" RCP	0.60%	740.31	738.12
B102 TO B101	257 LF	36" RCP	0.60%	741.95	740.41
B104-1 TO B102	58 LF	36" RCP	0.60%	742.39	742.05
B104-2 TO B104-1	10 LF	36" RCP	0.60%	742.54	742.49
B104-3 TO B104-2	11 LF	36" RCP	0.73%	742.72	742.64
B106 TO B104-3	110 LF	36" RCP	0.60%	743.48	742.82
B107 TO B106	124 LF	36" RCP	0.60%	744.32	743.58
B108 TO B107	122 LF	30" RCP	0.60%	745.56	744.82
B109-1 TO B108	117 LF	30" RCP	0.60%	746.35	745.66
B109-2 TO B109-1	11 LF	30" RCP	0.61%	746.42	746.35
B109-3 TO B109-2	11 LF	18" RCP	0.60%	746.58	746.52
B110 TO B109-3	65 LF	18" RCP	0.60%	746.97	746.58

STORM PIPES					
PIPE SEGMENT	LENGTH	DESCRIPTION	SLOPE	INV. (IN)	INV. (OUT)
B110A TO B110	207 LF	15" RCP	1.56%	751.46	748.22
B110B TO B110A	157 LF	15" RCP	1.78%	754.34	751.56
B111 TO B110	149 LF	15" RCP	2.42%	751.58	747.97
B111A TO B111	44 LF	15" RCP	3.00%	753.76	752.44
B112 TO B111	250 LF	15" RCP	3.22%	759.90	751.83
B112A TO B112	46 LF	15" RCP	2.00%	763.50	762.58
B113 TO B113M	55 LF	15" RCP	6.00%	778.04	774.72
B113A TO B113	44 LF	15" RCP	2.00%	780.48	779.60
B113M TO B112	208 LF	15" RCP	3.42%	767.11	760.00
B114 TO B113	235 LF	15" RCP	3.73%	786.90	778.14
B114A TO B114	44 LF	15" RCP	2.90%	787.89	787.00
B115 TO B114	236 LF	15" RCP	1.50%	790.54	787.01
B115A TO B115	44 LF	15" RCP	2.00%	792.09	791.21
B116 TO B115	269 LF	15" RCP	2.70%	797.90	790.64
B117 TO B116	44 LF	15" RCP	3.00%	802.88	801.56
C100 TO P-02	26 LF	30" RCP	1.00%	805.26	805.00
C101 TO C100	88 LF	30" RCP	2.38%	807.45	805.36
C102 TO C101	21 LF	30" RCP	10.00%	820.64	818.57

STORM PIPES					
PIPE SEGMENT	LENGTH	DESCRIPTION	SLOPE	INV. (IN)	INV. (OUT)
C102A TO C102	90 LF	15" RCP	1.27%	823.04	821.89
C102B TO C102	44 LF	15" RCP	2.00%	824.02	823.14
C103 TO C102	194 LF	24" RCP	2.89%	828.60	822.98
C103A TO C103	62 LF	15" RCP	2.90%	832.99	831.74
C104 TO C103	106 LF	24" RCP	0.85%	829.60	828.70
C104A TO C104	118 LF	18" RCP	0.59%	830.40	829.70
C104B TO C104	150 LF	15" RCP	1.00%	833.99	832.50
C105 TO C104	210 LF	18" RCP	1.13%	832.72	830.36
C105A TO C105	86 LF	15" RCP	1.15%	833.95	832.97
C106 TO C105	151 LF	15" RCP	0.59%	833.86	832.97
C106A TO C106	97 LF	15" RCP	1.00%	836.55	835.58
C107 TO C106	119 LF	15" RCP	1.04%	835.19	833.96
CU100 TO CU101	7 LF	24" RCP	2.50%	770.80	770.61
CU101 TO CU102	120 LF	24" RCP	3.94%	770.51	765.79
CU201 TO CU200	22 LF	24" RCP	8.62%	796.05	797.97
CU201 TO CU202	123 LF	24" RCP	8.89%	795.95	785.31
P-04 TO P-02	180 LF	30" RCP	0.51%	707.00	706.09
P-06 TO P-07	279 LF	30" RCP	0.80%	760.00	757.79

STORM PIPES					
PIPE SEGMENT	LENGTH	DESCRIPTION	SLOPE	INV. (IN)	INV. (OUT)
P-07 TO S111	68 LF	30" RCP	2.70%	757.67	755.84
P-02 TO P-05	108 LF	24" RCP	10.00%	782.10	792.94
PO-02 TO PO-01	50 LF	30" RCP	0.51%	705.99	705.74
R102 TO B107	263 LF	24" RCP	1.09%	748.00	745.12
R102A TO R102	226 LF	24" RCP	0.64%	749.54	748.10
R102B TO R102	240 LF	24" RCP	0.60%	749.54	748.10
RAIN 2 TO A106A	9 LF	24" HDPE	1.40%	748.76	748.64
S101-1 TO P-03	94 LF	24" RCP	3.77%	767.76	764.21
S101-2 TO S101-1	5 LF	36" RCP	0.50%	767.86	767.83
S102 TO S101-2	45 LF	36" RCP	6.74%	770.89	767.86
S103 TO S102	173 LF	36" RCP	0.60%	772.02	770.99
S104 TO S103	97 LF	36" RCP	0.60%	772.71	772.13
S105 TO S104	153 LF	36" RCP	0.60%	773.73	772.81
S106 TO S105	182 LF	36" RCP	0.60%	774.92	773.83
S107 TO S106	141 LF	36" RCP	0.60%	775.87	775.02
S108 TO S107	134 LF	36" RCP	0.60%	776.77	775.97
S109 TO S108	267 LF	36" RCP	0.60%	778.47	776.87
S110 TO S109	300 LF	36" RCP	0.60%	780.37	778.57

ECS **ECS MID-ATLANTIC, LLC**
Geotechnical • Construction Materials • Environmental • Facilities

November 10, 2025

Mr. Josh MacDonald, P.E.
Kimley-Horn
11400 Commerce Park Drive
Suite 400
Reston, VA 20191

ECS Project No. 12:20540

Reference: Preliminary Settlement Expectations for Stormwater Management Ponds
Appomattox Business Center - Preliminary
Richmond Highway
Appomattox, Virginia

Dear Mr. MacDonald:

As discussed during our phone call on October 20, 2025, ECS evaluated the potential settlement associated with the proposed fill placement at the planned stormwater management Ponds A, B, and C. This letter summarizes our evaluation and outlines the expected geotechnical impacts of the proposed SWM embankment fills.

We reviewed the plan set titled *Project Hercules*, prepared by Kimley-Horn and dated October 24, 2025 (Sheets CG-100 and CG-102 through CG-106). We also reviewed available preliminary subsurface information, including existing boring logs in the vicinity of each proposed pond.

Based on the information provided, we understand that up to about 30 feet of new fill is proposed at Pond A, 18 feet at Pond B, and 17 feet at Pond C. Our preliminary analyses included estimating the total settlement expected to occur as a result of these fill placements.

It is noted that the location of Pond B has been revised to the northeastern portion of the site. Although no borings are currently available within this relocated area, subsurface conditions are expected to be generally consistent across the site. Accordingly, the preliminary settlement estimates developed for this evaluation are considered representative for Pond B.

Note that this preliminary analysis was performed using the available borings and laboratory testing results obtained during the preliminary subsurface exploration phase. Additional subsurface exploration and laboratory testing will be needed to refine and confirm the final estimated settlement values at these locations.

Based on our preliminary analyses, the total long-term settlement resulting from the proposed fill placement is estimated to be on the order of approximately 6 inches at Ponds A and C. Though no borings have been performed at Pond B, we anticipate the settlement at this location to be similar in nature

Avao Business Center – Preliminary SWM Settlement Analysis
ECS Project No. 12:20540

November 10, 2025
Page 2

and magnitude. These settlements are expected to occur primarily during and shortly after fill placement with the overall settlement anticipated to be largely elastic in nature. The estimated settlement magnitudes are based on the proposed grading conditions and are expected to develop over a period of approximately 20 years.

Should you have any questions regarding this evaluation, or if we may provide additional assistance, please do not hesitate to contact our office.

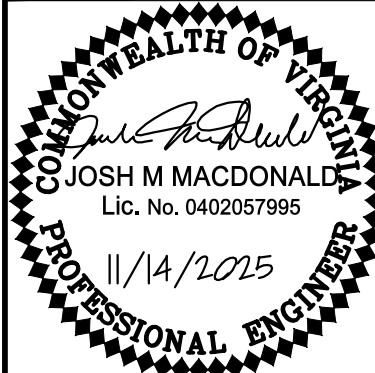
Sincerely,

ECS MID-ATLANTIC, LLC

Michael A. Rayl, P.E. Lance N. Bass
Principal Engineer

Project Engineer

Kimley»»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6606 PARAGON PLACE, SUITE 310, RICHMOND, VA 23230
PHONE: 804-673-3882
WWW.KIMLEY-HORN.COM



KHA PROJECT	DATE	SCALE	AS SHOW
113706001	11/14/2025	DESIGNED BY	S
		DRAWN BY	S
		CHECKED BY	JM

STORMWATER TABLES AND DETAILS

PROJECT HERCULES

SHEET NUMBER
CG-501

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	JIM CLARK 240.463.0124 JIM.CLARK@ADSPIPE.COM
ADS SALES REP	ERIC CZERWINSKI 540.319.0903 ERIC.CZERWINSKI@ADSPIPE.COM
PROJECT NO.	S426057



APPOMATTOX PROJECT HERCULES, BUILDING 1

APPOMATTOX PROJECT HERCULES, BUILDING 1

ADS HP RETENTION/DETENTION PIPE SYSTEM SPECIFICATION

THIS SPECIFICATION DESCRIBES ADS HP RETENTION/DETENTION PIPE SYSTEMS FOR USE IN NON-PRESSURE, GRAVITY-FLOW STORM WATER COLLECTION SYSTEMS UTILIZING ADS HP PIPE PRODUCTS AND A CONTINUOUS OUT FALL STRUCTURE.

PIPE REQUIREMENTS

ADS RETENTION/DETENTION SYSTEMS MAY UTILIZE ANY OF THE VARIOUS PIPE PRODUCTS BELOW:

- HP STORM PIPE SHALL MEET ASTM F2881
- SAWITTE HP PIPE SHALL MEET ASTM F2764

ALL PRODUCTS SHALL HAVE A SMOOTH INTERIOR AND EITHER ANNULAR EXTERIOR CORRUGATIONS OR SMOOTH EXTERIOR WITH ANNULAR INNER CORRUGATIONS. PRODUCT-SPECIFIC PIPE SPECIFICATIONS ARE AVAILABLE IN THE DRAINAGE HANDBOOK SECTION 1 "SPECIFICATIONS".

JOINT PERFORMANCE

HP PIPE PRODUCTS PIPE SHALL BE JOINED USING A BELL AND SPIGOT JOINT. THE JOINT SHALL BE WATERTIGHT ACCORDING TO THE REQUIREMENTS OF ASTM D3212. SPIGOTS SHALL HAVE GASKETS MEETING THE REQUIREMENTS OF ASTM F477. 12-60 INCH (300-1500 mm) DIAMETERS SHALL HAVE A BELL REINFORCED WITH A POLYMER COMPOSITE BAND. THE BELL TOLERANCE DEVICE SHALL BE INSTALLED BY THE MANUFACTURER.

PIPE AND FITTING CONNECTIONS SHALL UTILIZE A SPUN-ON, WELDED OR INTEGRAL BELL AND SPIGOT. DETENTION SYSTEMS ARE SUBJECT TO GREATER LEAKAGE THAN TYPICAL STORM SOWER APPLICATIONS AND THEREFORE ARE NOT APPROPRIATE FOR APPLICATIONS REQUIRING LONG-TERM FLUID CONTAINMENT OR HYDROSTATIC PRESSURE. FOR ADDITIONAL DETAILS REFER TO TECHNICAL NOTE 7.01 "RAINWATER HARVESTING".

FITTINGS

FITTINGS SHALL CONFORM TO ASTM F2881 OR F2764 FOR APPLICABLE PIPE TYPE AND DIAMETERS. CUSTOM FITTINGS ARE AVAILABLE AND MAY REQUIRE SPECIAL INSTALLATION CRITERION.

INSTALLATION

INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321 AND ADS RECOMMENDED INSTALLATION GUIDELINES, WITH THE EXCEPTION THAT MINIMUM COVER IN NON-TRAFFIC AREAS FOR 12-60 INCH (300-1500 mm) DIAMETERS SHALL BE 1 FT (0.3 m). MINIMUM COVER IN TRAFFICKED AREAS FOR 12-36 INCH (300-900 mm) DIAMETERS SHALL BE 1 FT (0.3 m) AND FOR 42-60 INCH (1065-1500 mm) DIAMETERS, THE MINIMUM COVER SHALL BE 2 FT (0.6 m). BACKFILL SHALL CONSIST OF CLASS I (COMPACTED), OR CLASS II (MINIMUM 90% SDP) MATERIAL, WITH THE EXCEPTION THAT 60 INCH (1500 mm) SYSTEMS SHALL USE CLASS I MATERIAL ONLY. MINIMUM COVER HEIGHTS DO NOT ACCOUNT FOR PIPE BUOYANCY. REFER TO ADS TECHNICAL NOTE 5.05 "PIPE FLUTATION" FOR BUOYANCY DESIGN CONSIDERATIONS. MAXIMUM COVER OVER SYSTEM USING STANDARD BACKFILL IS 8 FT (2.4 m). CONTACT A REPRESENTATIVE WHEN MAXIMUM FILL HEIGHT MAY BE EXCEEDED.

ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES:

- ALL ELEVATIONS, DIMENSIONS AND LOCATIONS OF RISERS, INLETS AND OUTLETS, SHALL BE VERIFIED BY THE ENGINEER PRIOR TO FABRICATION.
- IN SITUATIONS WHERE A FINE-GRAINED BACKFILL MATERIAL IS USED ADJACENT TO THE PIPE SYSTEM, AND ESPECIALLY INVOLVING GROUND WATER CONDITIONS, CONSIDERATION SHOULD BE GIVEN TO THE USE OF GASKETED PIPE JOINTS. AT THE VERY LEAST THE PIPE JOINTS SHOULD BE WRAPPED IN A SUITABLE, NON-WOVEN GEOTEXTILE FABRIC TO PREVENT INFILTRATION OF FINES INTO THE PIPE SYSTEM.
- CONSIDERATION FOR CONSTRUCTION EQUIPMENT LOADS MUST BE TAKEN INTO ACCOUNT.
- ALL PIPE DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES.
- ALL RISERS TO BE FIELD EXTENDED OR TRIMMED TO FINAL GRADE.

THE UNDERSIGNED HEREBY APPROVES THE ATTACHED PAGES.

CUSTOMER DATE

BILL OF MATERIALS

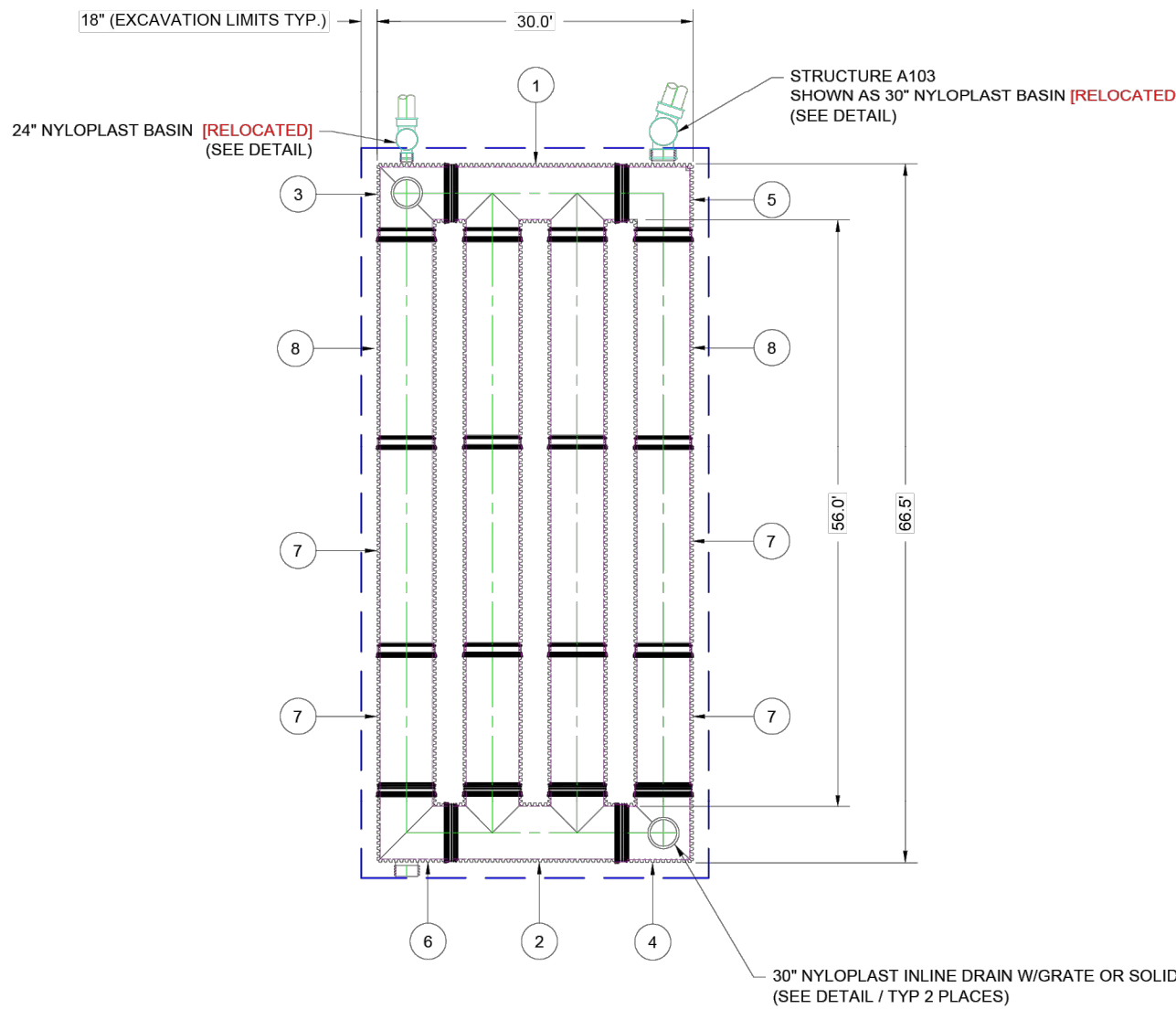
*THE COMPONENTS AND QUANTITIES LISTED HEREIN ARE NOT INTENDED TO BE A COMPREHENSIVE MATERIAL LIST. EXTRA COMPONENTS, NOT LISTED HEREIN, MAY BE NECESSARY TO COMPLETE THE CONSTRUCTION OF THE SYSTEM.

ITEM	QTY.	PART #	DESCRIPTION	MATERIAL	VENDOR	NOTE
1	1	6052AN65BP	60" HP DW DOUBLE MANIFOLD TEE	PP	ADS	SEE DETAIL
2	1	6052AN65GP	60" HP DW DOUBLE MANIFOLD TEE	PP	ADS	SEE DETAIL
3	1	BEND-1	60" X 90" HP DW MANIFOLD BEND	PP	ADS	SEE DETAIL
4	1	BEND-2	60" X 90" HP DW MANIFOLD BEND	PP	ADS	SEE DETAIL
5	1	6098AN65BBP-1	60" X 90" HP DW MANIFOLD BEND	PP	ADS	SEE DETAIL
5-2	1	2406ANP	24" HP DW STUB	PP	ADS	COMPONENT
6	1	6098AN65GGP-1	60" X 90" HP DW MANIFOLD BEND	PP	ADS	SEE DETAIL
6-2	1	2406ANP	24" HP DW STUB	PP	ADS	COMPONENT
7	4	STICK-1	60" HP DW PIPE STICK : SOLID	PP	ADS	SEE DETAIL
8	8	60650020IBPL1	60" HP DW PIPE STICK : SOLID	PP	ADS	WTIB
1	TBD BY ENGINEER		ADS GEOTEXTILE FABRIC	AS SPECIFIED	ADS	AS NEEDED
2	2730AG		30" NYLOPLAST INLINE DRAIN	AS SPECIFIED	ADS	SEE DETAIL
1	2824AG		24" NYLOPLAST DRAIN BASIN	AS SPECIFIED	ADS	SEE DETAIL
1	2830AG		30" NYLOPLAST DRAIN BASIN	AS SPECIFIED	ADS	SEE DETAIL
1	AS SPECIFIED		ADS GEOTEXTILE FABRIC	AS SPECIFIED	ADS	AS NEEDED

NOTES

- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE PIPE COVER REQUIREMENTS ARE MET.
- THE SITE DESIGN ENGINEER MUST REVIEW THE PROXIMITY OF THE PIPE TO THE RETAINING WALL AND CONSIDER EFFECTS OF POSSIBLE SATURATED SOILS ON THE RETAINING WALL'S INTEGRITY.
- STUB SIZES AND INVERTS TO BE VERIFIED BY THE SITE DESIGN ENGINEER PRIOR TO FABRICATION.
- ADS RISERS ARE FABRICATED 30" (800 mm) FROM TOP OF PIPE TO TOP OF RISER DUE TO SHIPPING LIMITATIONS. ADDITIONAL PIPE AND COUPLERS CAN BE USED TO EXTEND THE RISERS TO GRADE.
- ALL CISTERN CONNECTIONS SHALL ALSO BE WRAPPED WITH A MARMAC COUPLER FOR POLYPROPYLENE PIPE.

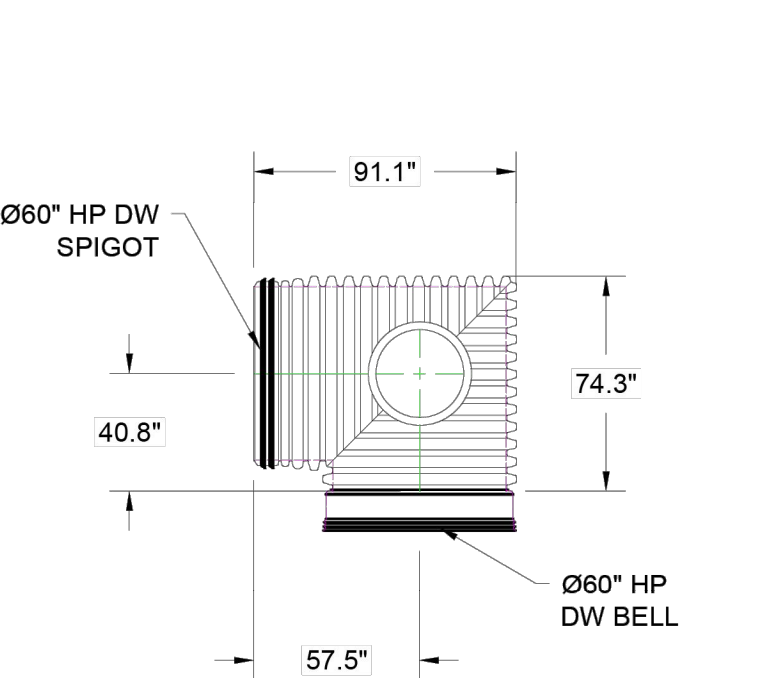
NOT FOR CONSTRUCTION: THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.



ADS GEOTEXTILE FABRIC
(IF REQUIRED BY SITE DESIGN ENGINEER)

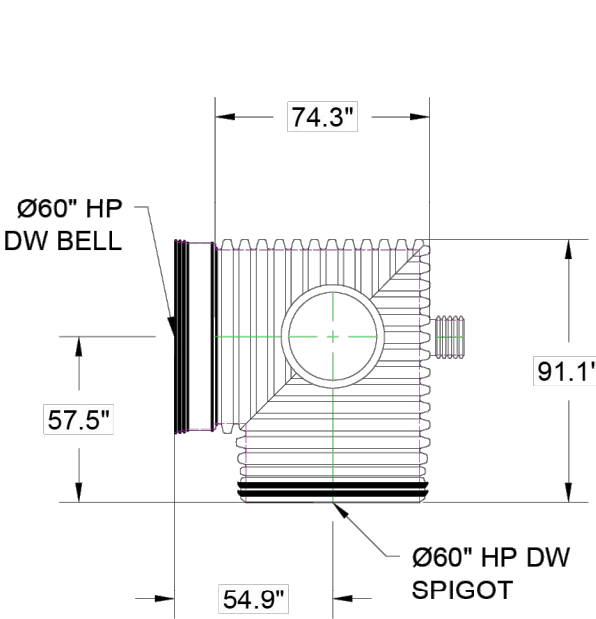
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60" HP STORM SOLID DETENTION Dual Wall Pipe		DATE: 08-29-24	DRAWN: LAH
4640 TRILMAN BLVD HILLIARD, OH 43026		DATE: 08-29-24	DRAWN: LAH
THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER. ADS ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION PROVIDED OR THE PROJECT'S SUCCESS OR FAILURE. THE PROJECT'S SUCCESS OR FAILURE IS THE RESPONSIBILITY OF THE CLIENT. THE PROJECT'S SUCCESS OR FAILURE IS THE RESPONSIBILITY OF THE CLIENT. THE PROJECT'S SUCCESS OR FAILURE IS THE RESPONSIBILITY OF THE CLIENT.		DATE: 08-29-24	DRAWN: LAH
2		OF	7

60" X 90" MANIFOLD BEND W/ 30" RISER



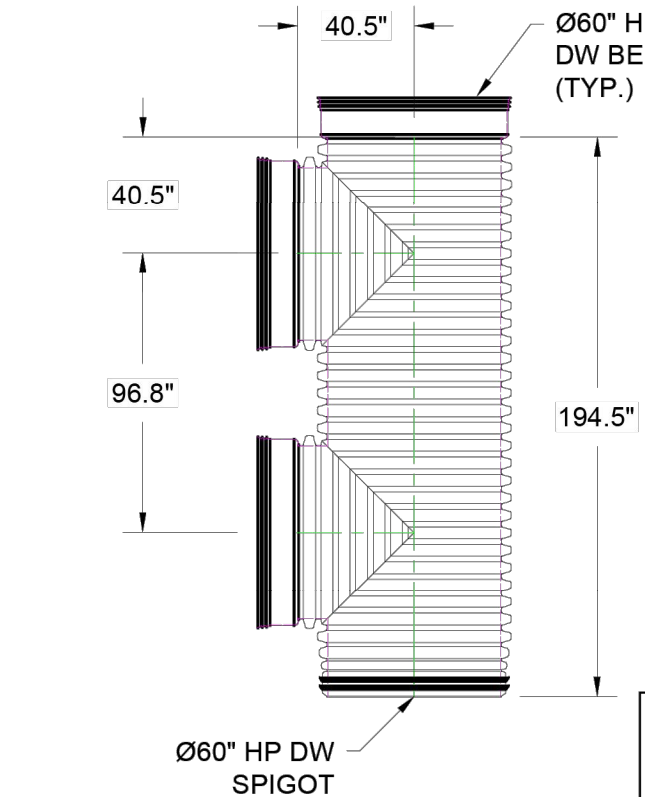
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BEND-2

60" X 90" MANIFOLD BEND W/12" STUB & 30" RISER



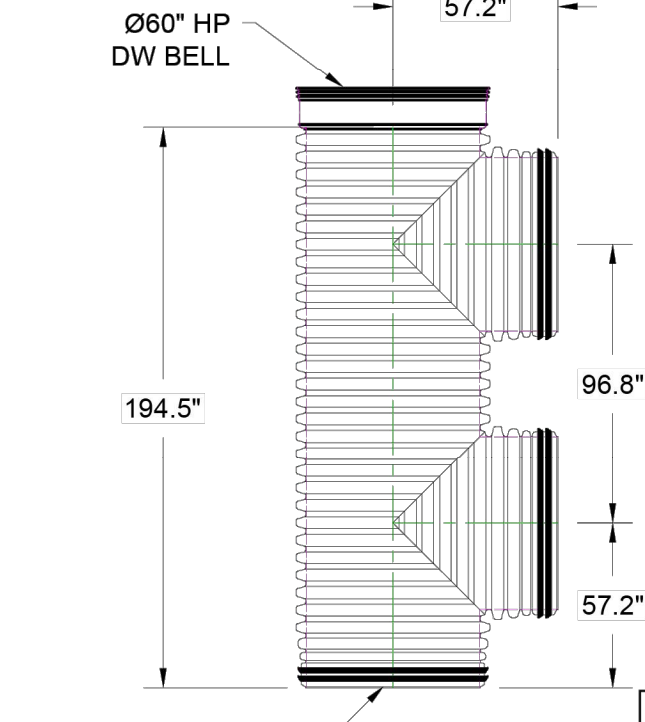
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QTY: 1
BEND-1

60" HP DW DOUBLE MANIFOLD TEE



ITEM #: 1
QTY: 1
6052AN65BP

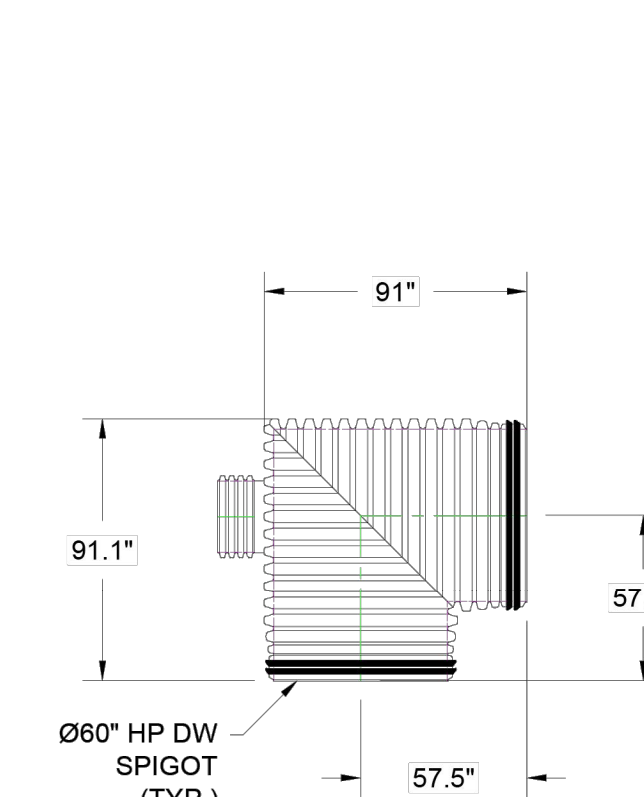
60" HP DW DOUBLE MANIFOLD TEE



ITEM #: 2
QTY: 1
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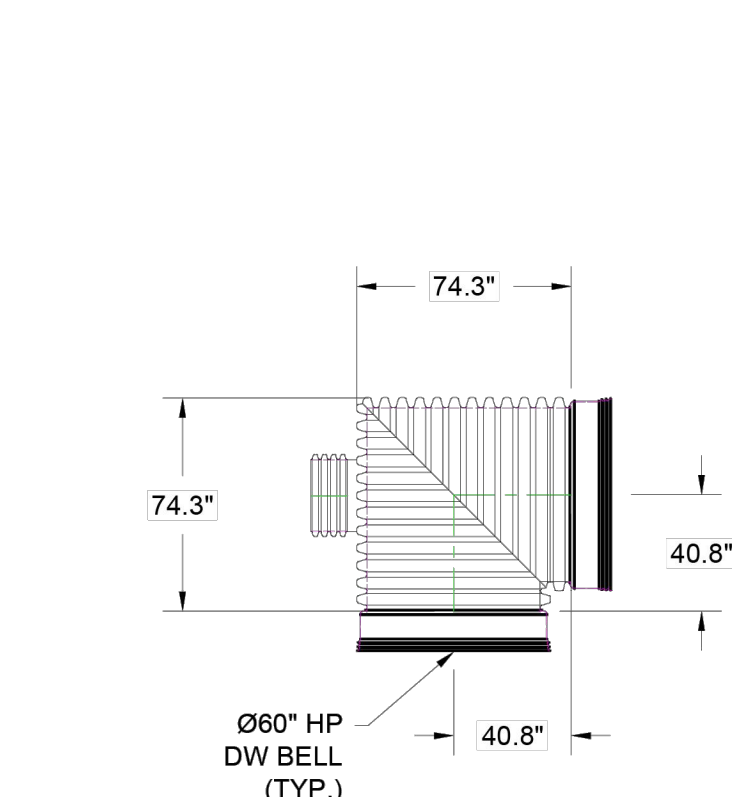
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60" HP STORM SOLID DETENTION LandMax		DATE: 08-29-24	DRAWN: LAH
4640 TRILMAN BLVD HILLIARD, OH 43026		DATE: 08-29-24	DRAWN: LAH
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3		OF	7

60" X 90" MANIFOLD BEND W/24" STUB



ITEM #: 6
QTY: 1
6098AN65GGP-1

60" X 90" MANIFOLD BEND W/24" STUB



ITEM #: 5
QTY: 1
6098AN65BBP-1

AVAIO CARMEL CHURCH BUILDING A & B RUTHER GLEN, VA		DATE: 08-29-24	DRAWN: LAH
60" HP STORM SOLID DETENTION LandMax		DATE: 08-29-24	DRAWN: LAH
4640 TRILMAN BLVD HILLIARD, OH 43026		DATE: 08-29-24	DRAWN: LAH
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4		OF	7

KHA PROJECT
113706001
DATE
11/14/2025
SCALE
AS SHOWN
DESIGNED BY
STM
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STM
CHECKED BY
JMM

RAINWATER
HARVESTING
DETAILS

PROJECT HERCULES
SHEET NUMBER
CG-503
APPOMATTOX COUNTY
VA

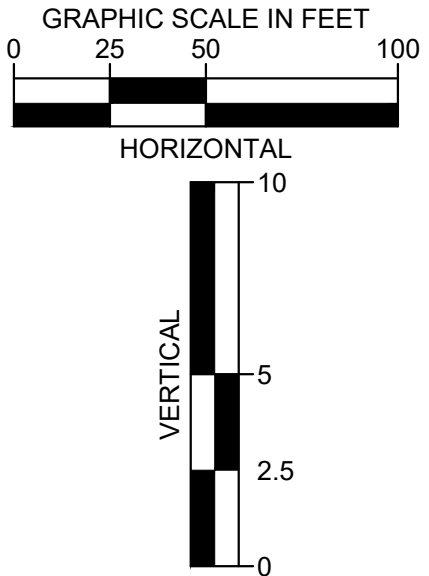
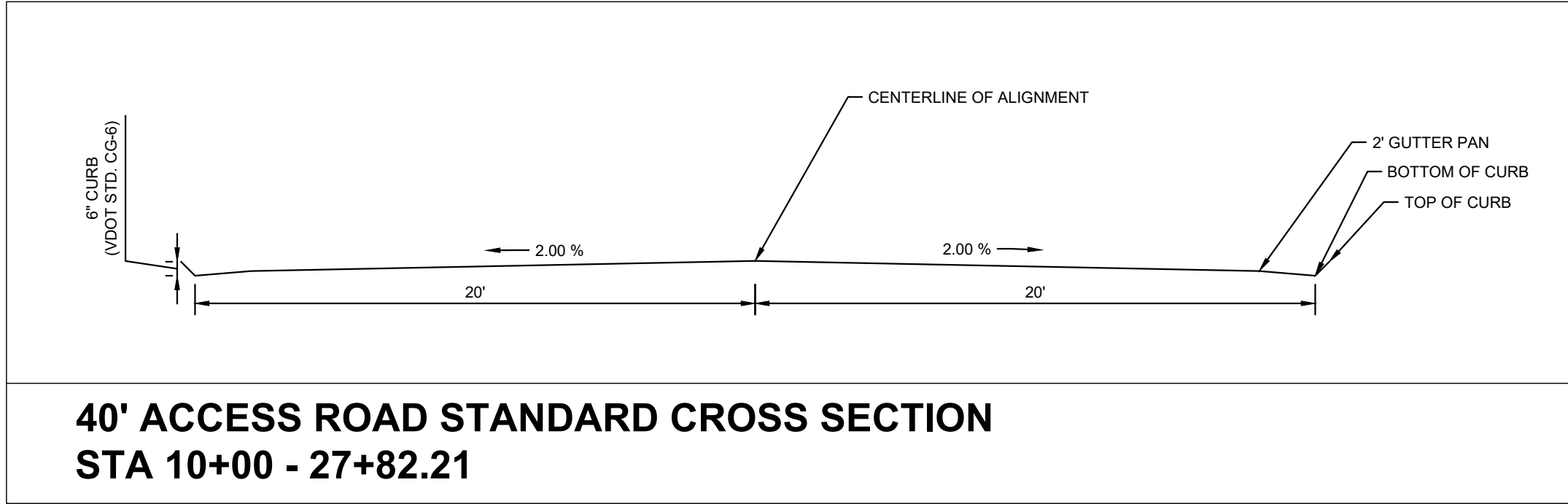
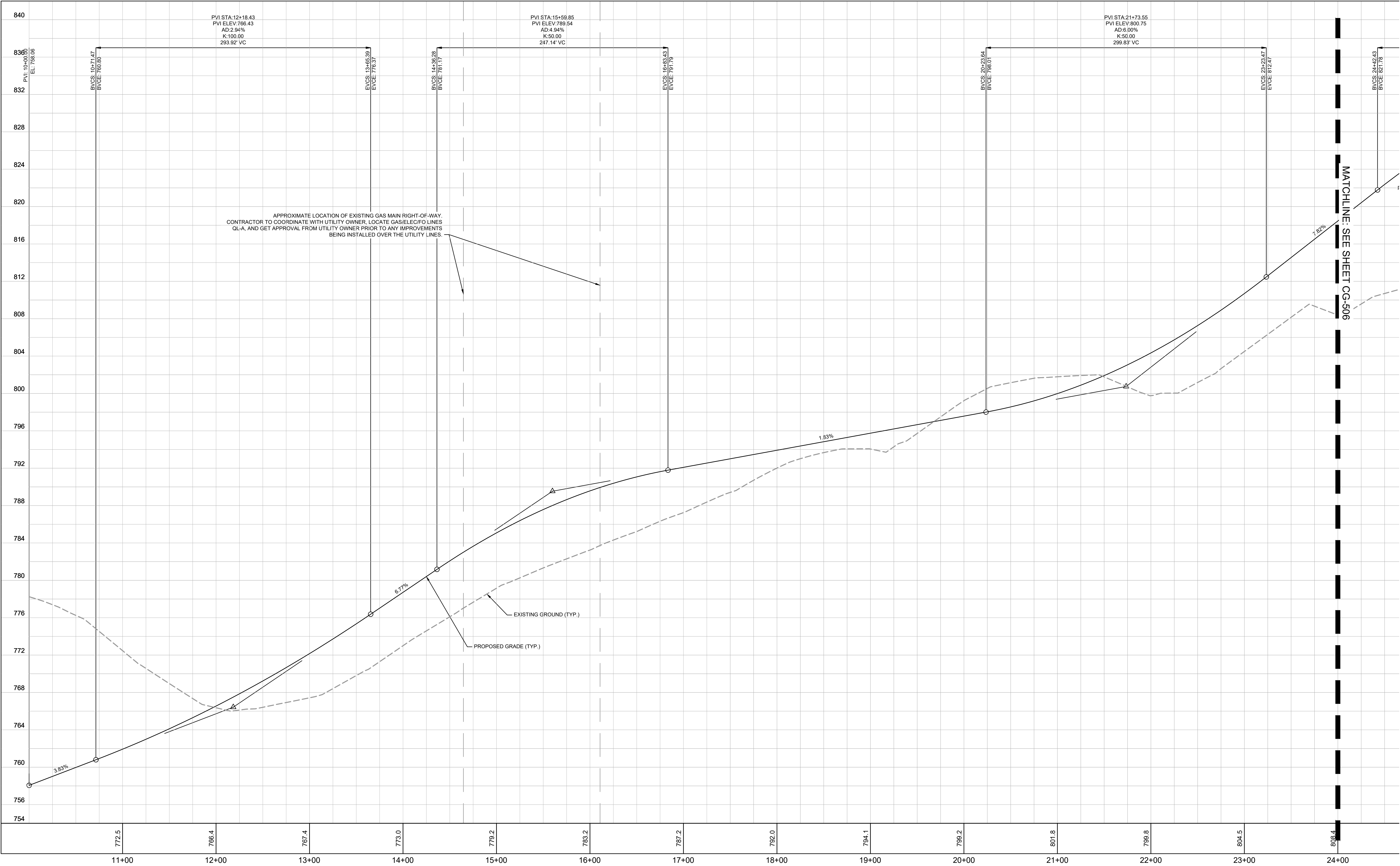
Kimley»Horn
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6806 PARAGON PLACE, SUITE 310, RICHMOND, VA 23230
PHONE: 804-673-9882
WWW.KIMLEY-HORN.COM

COMMONWEALTH OF VIRGINIA
JOSH M MACDONALD
Lic. No. 0402057995
11/14/2025
PROFESSIONAL ENGINEER

PROJECT HERCULES
SHEET NUMBER
CG-503
APPOMATTOX COUNTY
VA

RAINWATER
HARVESTING
DETAILS

Plotted By:McGray, Stephen Sheet Set:Kha Layout:CG-505 ACCESS ROAD PROFILE November 05, 2025 04:46:53pm
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DRAWN BY	STM
CHECKED BY	JMM

PROJECT HERCULES

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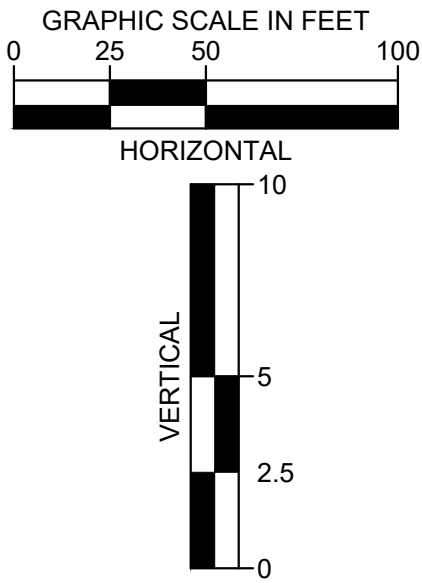
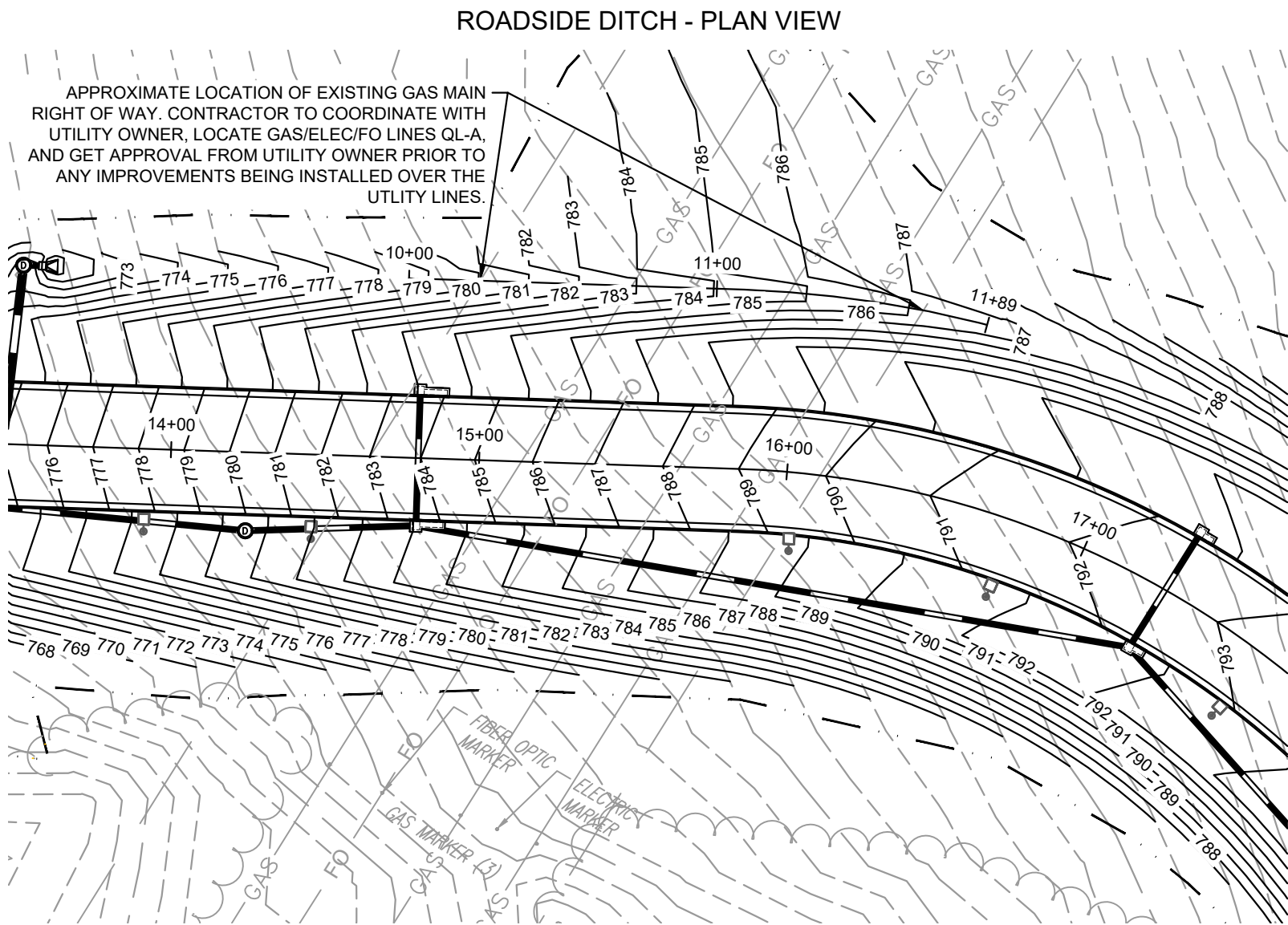
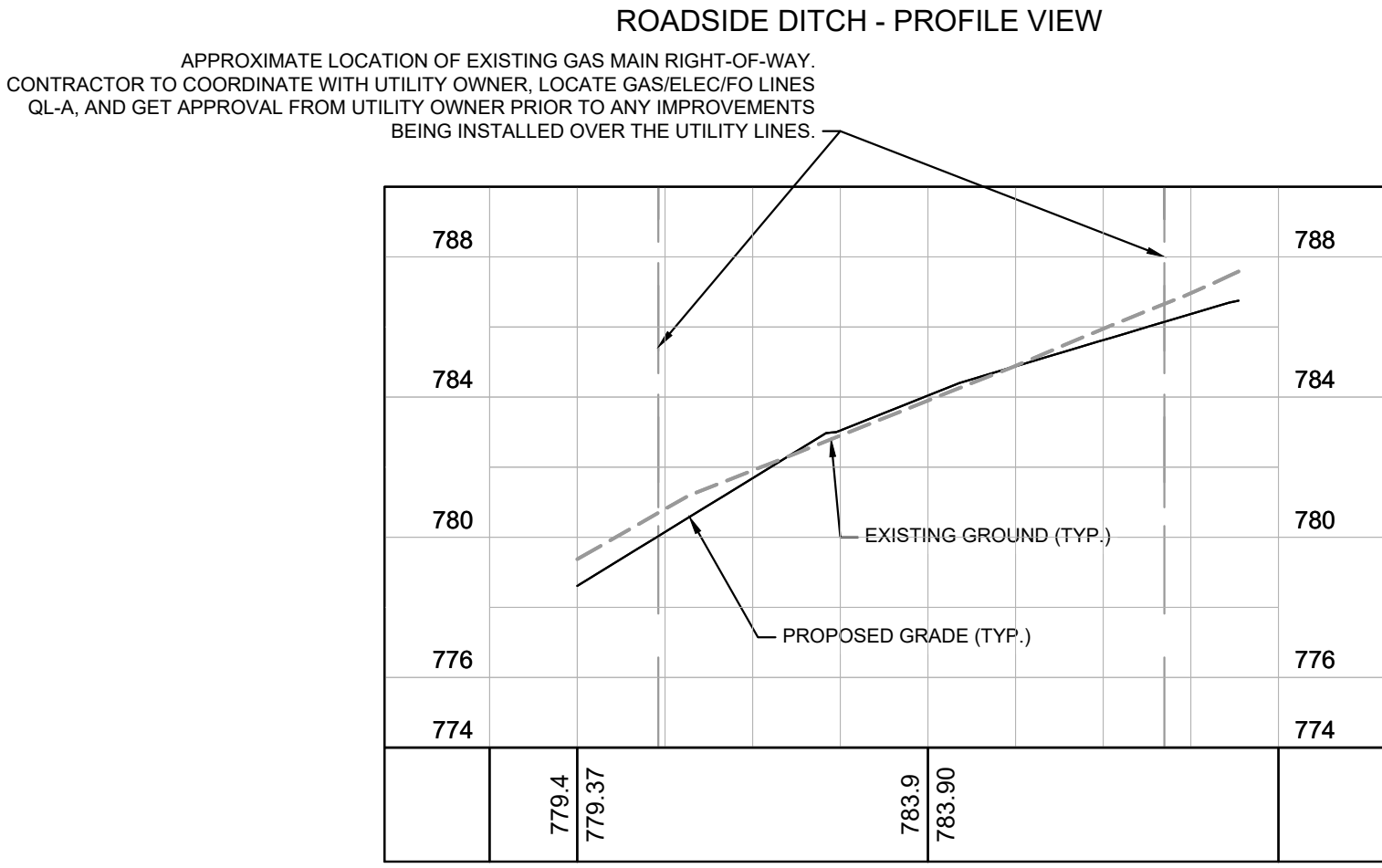
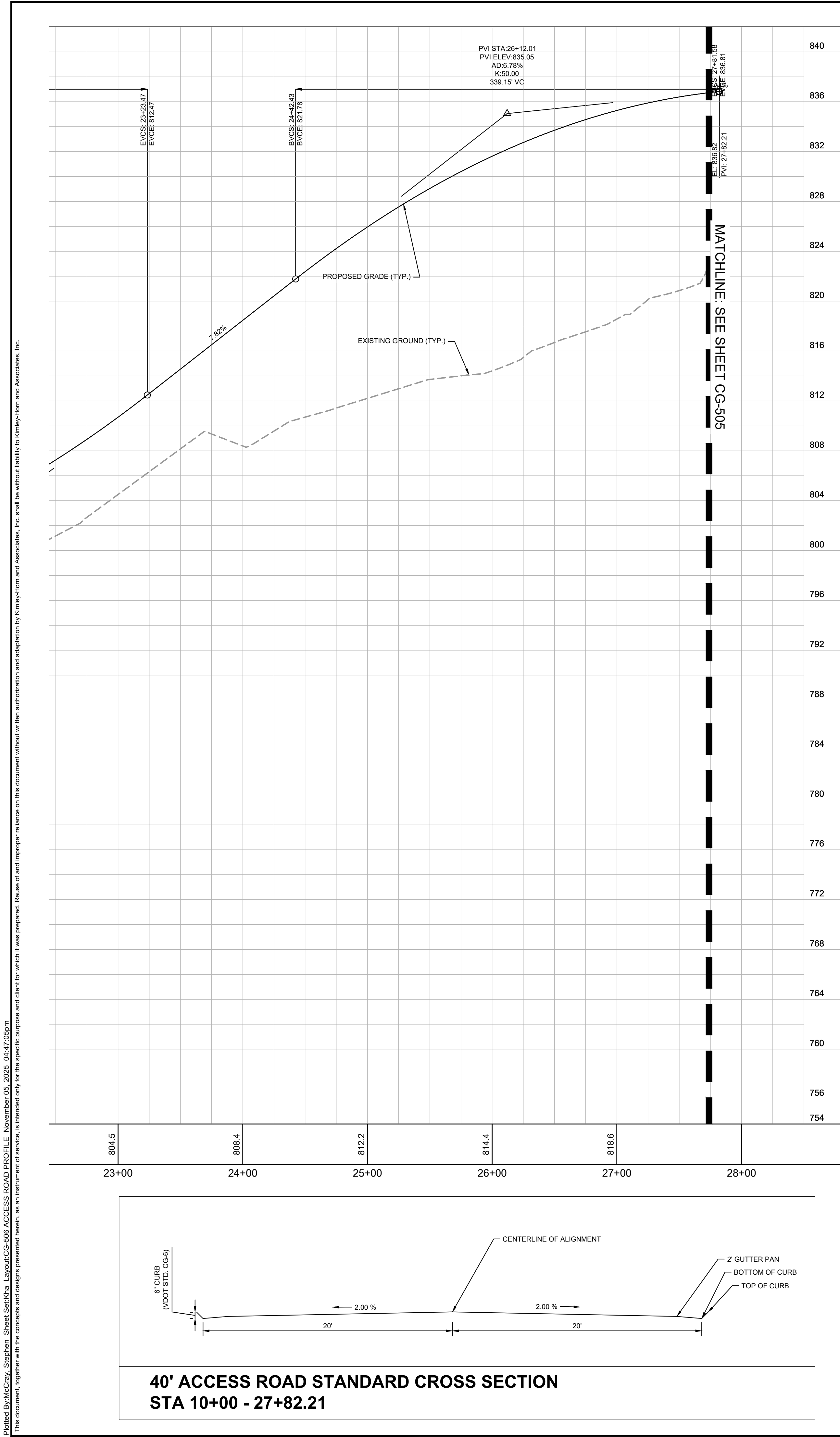
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SHEET NUMBER

CG-505

APPOMATTOX COUNTY

VA



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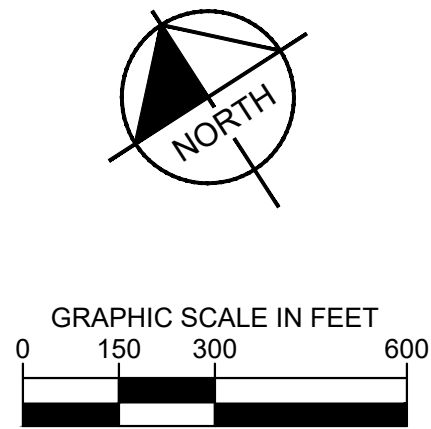
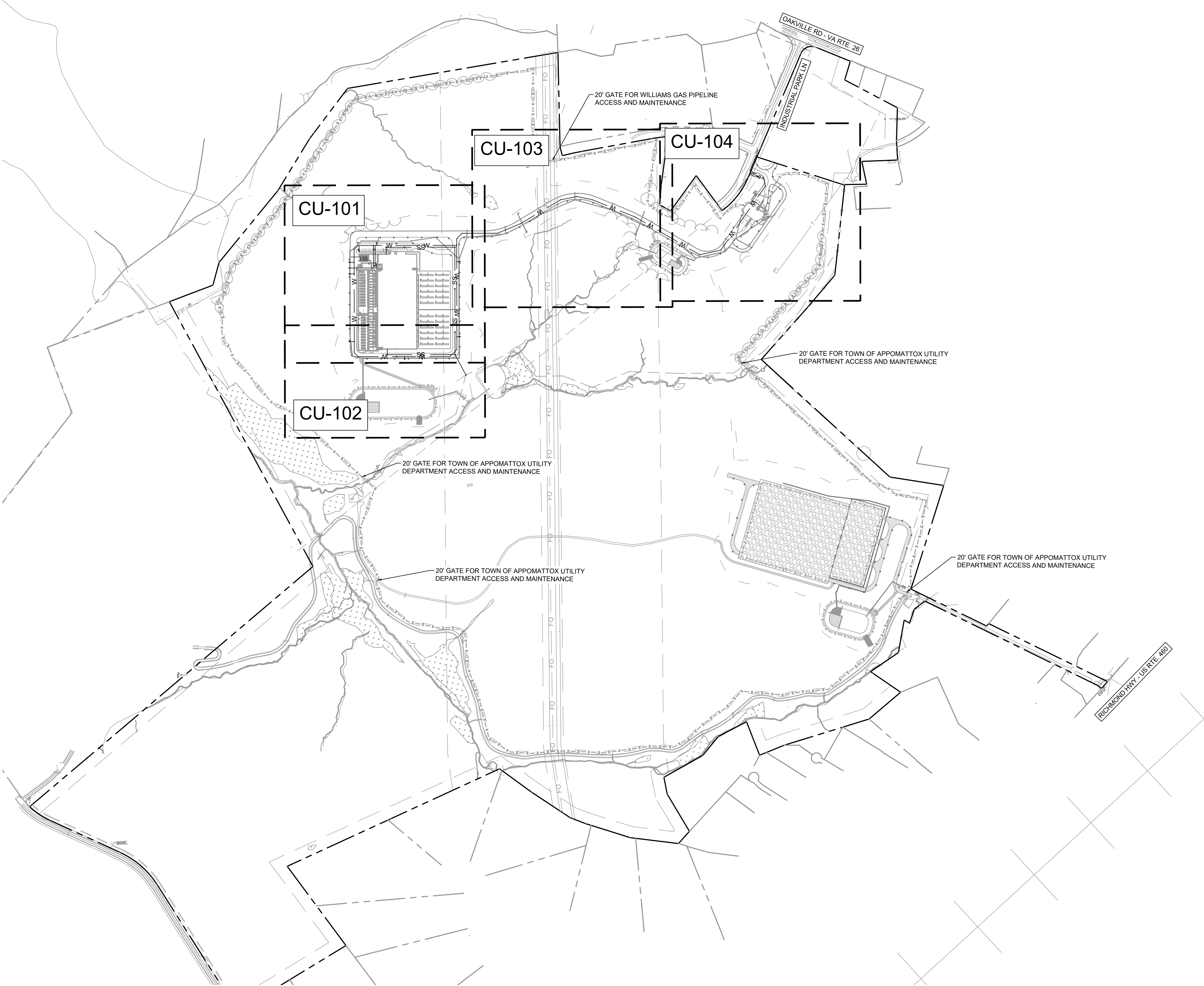
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VA

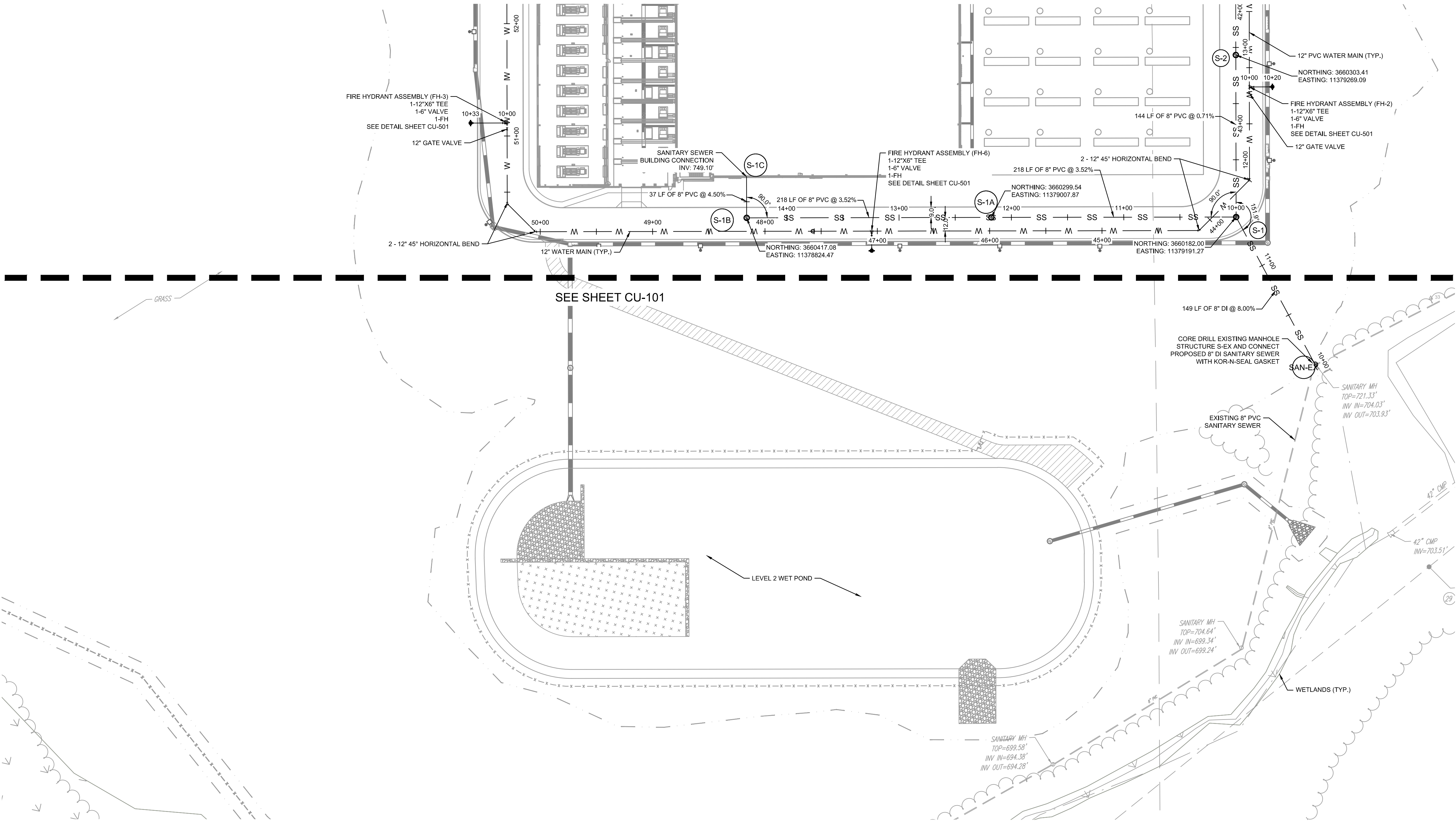
SHEET NUMBER
CG-506

APPOMATTOX COUNTY

Plotted By:McGraw, Stephen Sheet Set:Kha Layout:CU-100 UTILITY PLAN November 05, 2025 04:48:24pm
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Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CU-102 UTILITY PLAN November 10, 2025 11:08:05am
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UTILITY NOTES

- CONTRACTOR TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION AND NOTIFY KIMLEY-HORN IN ORDER TO VERIFY ADEQUATE SEPARATION BETWEEN UTILITIES CAN BE ACHIEVED AND NO CONFLICTS EXIST.
- RPZ BACKFLOW PREVENTERS FOR DOMESTIC SERVICE LINE SHALL BE PROVIDED WITHIN BUILDING MECHANICAL ROOM.
- REFER TO SHEET CV-101 THROUGH CV-106 FOR ALL EXISTING EASEMENTS AND UTILITIES. CONTRACTOR TO COORDINATE
- REFER TO SHEETS CU-501 - CU-502 FOR ALL UTILITY DETAILS.
- THE CONTRACTOR SHALL COORDINATE SHUTOFFS WITH THE TOWN OF APPOMATTOX DEPARTMENT OF PUBLIC UTILITIES. ONLY PUBLIC UTILITIES PERSONNEL MAY OPERATE THE NECESSARY VALVES TO MAKE WATERLINE TIE-INS AND PERFORM FLUSHING AND TESTING OPERATIONS.
- ONLY ONE FIRE HYDRANT EXTENSION IS ALLOWED PER INSTALLED HYDRANT.
- WHENEVER CONNECTING A SEWER LINE TO AN EXISTING MANHOLE, CORE DRILLING, A FLEXIBLE PIPE-TO-MANHOLE CONNECTOR SHALL BE USED, THE CONNECTOR SHALL BE A KOR-N-SEAL ASSEMBLY OR AN APPROVED EQUAL. IT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

APPROXIMATE UTILITY QUANTITIES

APPROXIMATE WATER QUANTITIES (PRIVATE):

12" PVC C900 CLASS 200	5,517 LF
2" ASTM B88 TYPE K FLEXIBLE COPPER	127 LF
1" ASTM B88 TYPE K FLEXIBLE COPPER	35 LF
6" DI CLASS 52	315 LF
2" METER	1 EA
3/4" IRRIGATION METER	1 EA
AIR RELEASE VALVE	2 EA

APPROXIMATE SAN. SEWER QUANTITIES (PRIVATE):

4" PVC GRAVITY SANITARY SEWER ASTM 3034-77 (SDR 35)	42 LF
6" PVC GRAVITY SANITARY SEWER ASTM 3034-77 (SDR 35)	1388 LF
8" DIP SPECIAL THICKNESS CLASS 51 ANSI/AWWA C151	149 LF
SANITARY SEWER MANHOLES	8 EA

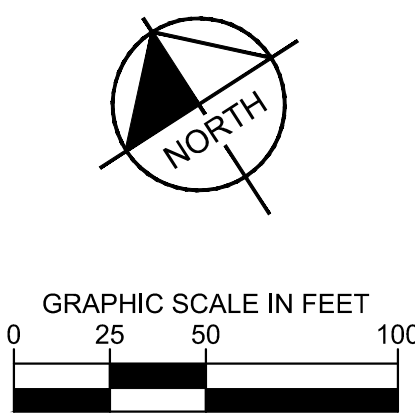
UTILITY LEGEND

SS	SS	SS	8" GRAVITY SANITARY SEWER
W	W	W	WATER MAIN
			GATE VALVE
			AIR RELEASE VALVE
			MANHOLE
			CLEANOUT
			FIRE HYDRANT ASSEMBLY
			YARD TYPE FIRE DEPARTMENT CONNECTION

TRANSCONTINENTAL GAS PIPELINE

RIGHT-OF-WAY WORK NOTES

- ONSITE: AN AUTHORIZED WILLIAMS REPRESENTATIVE MUST BE ON SITE PRIOR TO AND DURING ANY SURFACE DISTURBING WORK WITHIN THE TRANSCONTINENTAL GAS PIPELINE RIGHT-OF-WAY. THE AUTHORIZED COMPANY WILL ASSIST IN DETERMINING THE LOCATION OF THE PIPELINES, THE ROW WIDTH, AND THE EXISTING COVER OVER THE PIPELINE AND WILL REMAIN ON SITE TO MONITOR ALL ACTIVITIES WITHIN THE ROW.
- VIBRATORY EQUIPMENT: VIBRATORY EQUIPMENT IS PROHIBITED WITHIN THE LIMITS OF THE COMPANY ROW. VIBRATORY EQUIPMENT IS NOT PERMITTED TO BE USED FOR ACHIEVING APPLICABLE COMPACTION REQUIREMENTS.
- EXCAVATION: NO MACHINE EXCAVATION ALLOWED WITHIN 2 FEET OF ANY COMPANY PIPELINE. REMOVE SIDE CUTTERS FROM THE BUCKET, WELD OR ATTACH A BAR ACROSS THE TEETH.
- CROSSING ANGLE: ROADS AND UTILITIES SHALL CROSS AS CLOSE TO 90° AS POSSIBLE.
- NO HORIZONTAL OR VERTICAL BENDS ARE PERMITTED WITHIN COMPANY ROW.



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PHONE: 804-673-8882
WWW.KIMLEY-HORN.COM

KHA PROJECT	113706001	DATE	11/11/2025	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
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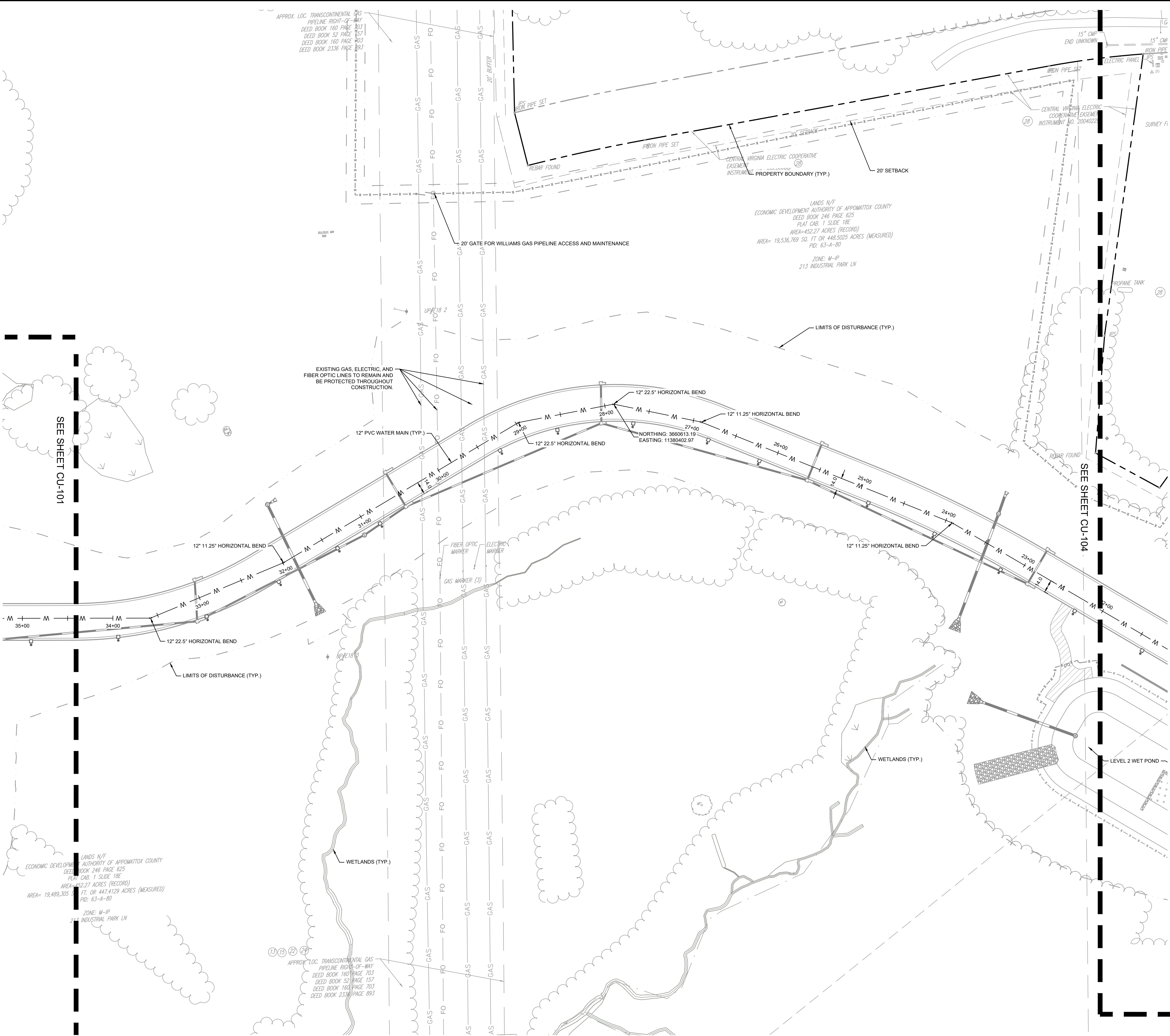
UTILITY PLAN

PROJECT HERCULES

APPOMATTOX COUNTY

SHEET NUMBER

CU-102



UTILITY NOTES

- CONTRACTOR TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION AND NOTIFY KIMLEY-HORN IN ORDER TO VERIFY ADEQUATE SEPARATION BETWEEN UTILITIES CAN BE ACHIEVED AND NO CONFLICTS EXIST.
- RP2 BACKFLOW PREVENTERS FOR DOMESTIC SERVICE LINE SHALL BE PROVIDED WITHIN BUILDING MECHANICAL ROOM.
- REFER TO SHEET CU-101 THROUGH CU-106 FOR ALL EXISTING EASEMENTS AND UTILITIES. CONTRACTOR TO COORDINATE
- REFER TO SHEETS CU-501 - CU-502 FOR ALL UTILITY DETAILS.
- THE CONTRACTOR SHALL COORDINATE SHUTOFFS WITH THE TOWN OF APPOMATTOX DEPARTMENT OF PUBLIC UTILITIES. ONLY PUBLIC UTILITIES PERSONNEL MAY OPERATE THE NECESSARY VALVES TO MAKE WATERLINE TIE-INS AND PERFORM FLUSHING AND TESTING OPERATIONS.
- ONLY ONE FIRE HYDRANT EXTENSION IS ALLOWED PER INSTALLED HYDRANT.
- WHENEVER CONNECTING A SEWER LINE TO AN EXISTING MANHOLE, CORE DRILLING, A FLEXIBLE PIPE-TO-MANHOLE CONNECTOR SHALL BE USED. THE CONNECTOR SHALL BE A KOR-N-SEAL ASSEMBLY OR AN APPROVED EQUAL. IT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

APPROXIMATE UTILITY QUANTITIES

APPROXIMATE WATER QUANTITIES (PRIVATE):

12" PVC C900 CLASS 200	5,517 LF
2" ASTM B88 TYPE K FLEXIBLE COPPER	127 LF
1" ASTM B88 TYPE K FLEXIBLE COPPER	35 LF
6" DI CLASS 52	315 LF
2" METER	1 EA
3/4" IRRIGATION METER	1 EA
AIR RELEASE VALVE	2 EA

APPROXIMATE SAN. SEWER QUANTITIES (PRIVATE):

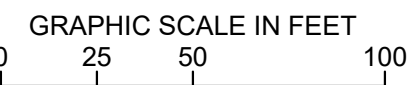
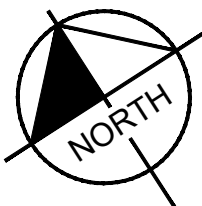
4" PVC GRAVITY SANITARY SEWER ASTM 3034-77 (SDR 35)	42 LF
8" PVC GRAVITY SANITARY SEWER ASTM 3034-77 (SDR 35)	1388 LF
8" DIP SPECIAL THICKNESS CLASS 51 ANSIAWWA C151	149 LF
SANITARY SEWER MANHOLES	8 EA

UTILITY LEGEND

SS	SS	SS	8" GRAVITY SANITARY SEWER	
W	W	W	W	WATER MAIN
	GATE VALVE			
	AIR RELEASE VALVE			
	MANHOLE			
	CLEANOUT			
	FIRE HYDRANT ASSEMBLY			
	YARD TYPE FIRE DEPARTMENT CONNECTION			

TRANSCONTINENTAL GAS PIPELINE RIGHT-OF-WAY WORK NOTES

- ONSITE: AN AUTHORIZED WILLIAMS REPRESENTATIVE MUST BE ON SITE PRIOR TO AND DURING ANY SURFACE DISTURBING WORK WITHIN THE TRANSCONTINENTAL GAS PIPELINE RIGHT-OF-WAY. THE AUTHORIZED COMPANY WILL ASSIST IN DETERMINING THE LOCATION OF THE PIPELINES, THE ROW WIDTH, AND THE EXISTING COVER OVER THE PIPELINE AND WILL REMAIN ON SITE TO MONITOR ALL ACTIVITIES WITHIN THE ROW.
- VIBRATORY EQUIPMENT: VIBRATORY EQUIPMENT IS PROHIBITED WITHIN THE LIMITS OF THE COMPANY ROW. VIBRATORY EQUIPMENT IS NOT PERMITTED TO BE USED FOR ACHIEVING APPLICABLE COMPACTION REQUIREMENTS.
- EXCAVATION: NO MACHINE EXCAVATION ALLOWED WITHIN 2 FEET OF ANY COMPANY PIPELINE. REMOVE SIDE CUTTERS FROM THE BUCKET. WELD OR ATTACH A BAR ACROSS THE TEETH.
- CROSSING ANGLE: ROADS AND UTILITIES SHALL CROSS AS CLOSE TO 90° AS POSSIBLE.
- NO HORIZONTAL OR VERTICAL BENDS ARE PERMITTED WITHIN COMPANY ROW.



KHA PROJECT	113706001	DATE	11/14/2025	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
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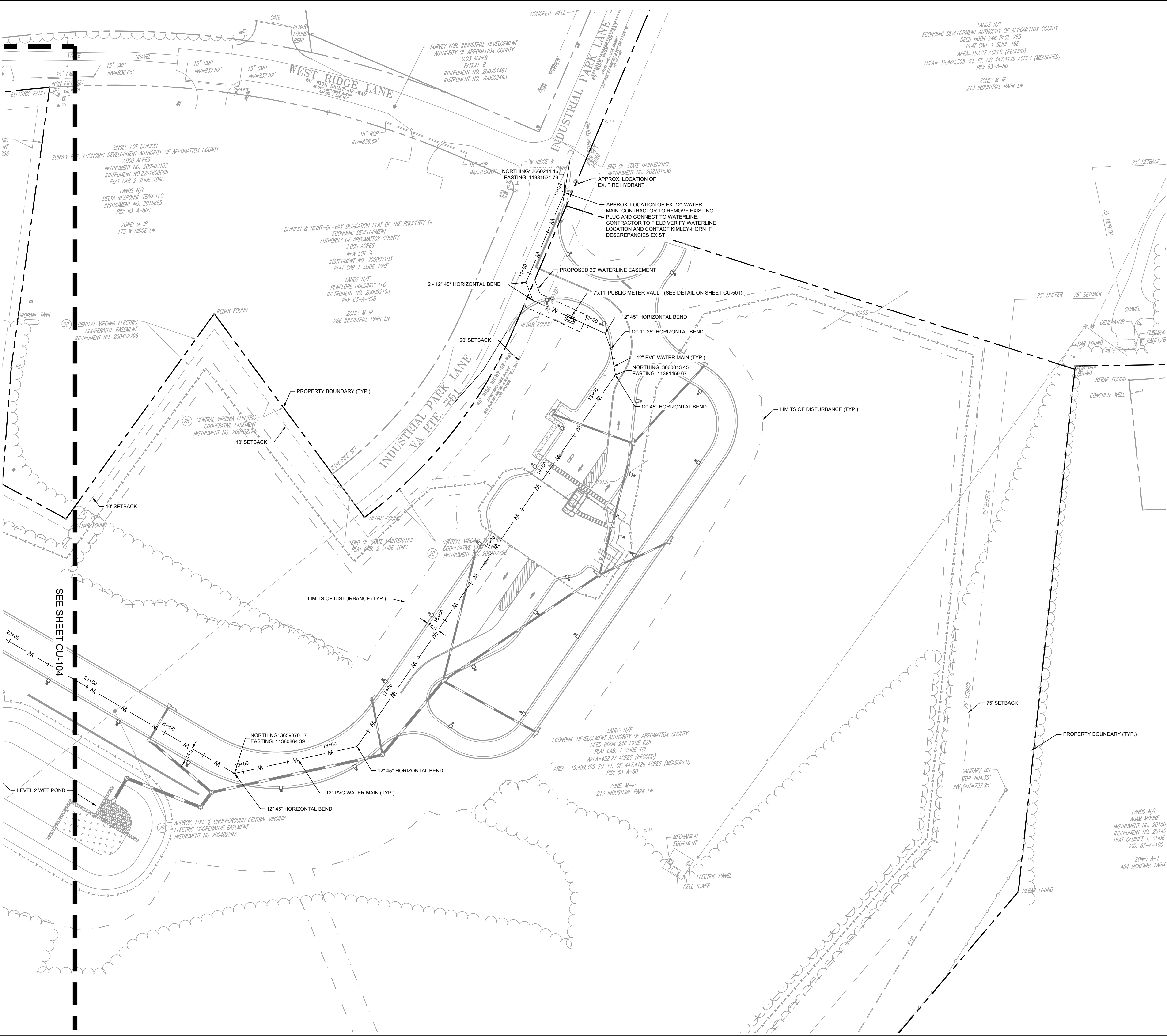
UTILITY PLAN

PROJECT HERCULES

SHEET NUMBER
CU-103

VA
APPOMATTOX COUNTY

Plotted By:McGray, Stephen Sheet Set:Kha Layout:CU-104 UTILITY PLAN November 05, 2025 04:49:55pm
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UTILITY NOTES

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- REFER TO SHEETS CU-501 - CU-502 FOR ALL UTILITY DETAILS.
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APPROXIMATE UTILITY QUANTITIES

APPROXIMATE WATER QUANTITIES (PRIVATE):

12" PVC C900 CLASS 200	5,517 LF
2" ASTM B88 TYPE K FLEXIBLE COPPER	127 LF
1" ASTM B88 TYPE K FLEXIBLE COPPER	35 LF
6" DI CLASS 52	315 LF
2" METER	1 EA
3/4" IRRIGATION METER	1 EA
AIR RELEASE VALVE	2 EA

APPROXIMATE SAN. SEWER QUANTITIES (PRIVATE):

4" PVC GRAVITY SANITARY SEWER ASTM 3034-77 (SDR 35)	42 LF
8" PVC GRAVITY SANITARY SEWER ASTM 3034-77 (SDR 35)	1388 LF
8" DIP SPECIAL THICKNESS CLASS 51 ANSI/AWWA C151	149 LF
SANITARY SEWER MANHOLES	8 EA

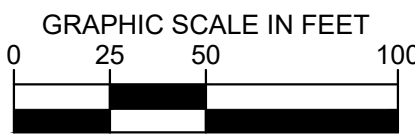
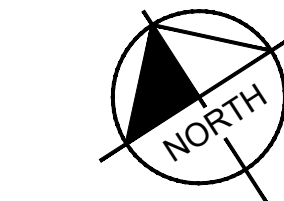
UTILITY LEGEND

SS	SS	SS	8" GRAVITY SANITARY SEWER
W	W	W	WATER MAIN
+			GATE VALVE
+			AIR RELEASE VALVE
+			MANHOLE
+			CLEANOUT
+			FIRE HYDRANT ASSEMBLY
+			YARD TYPE FIRE DEPARTMENT CONNECTION

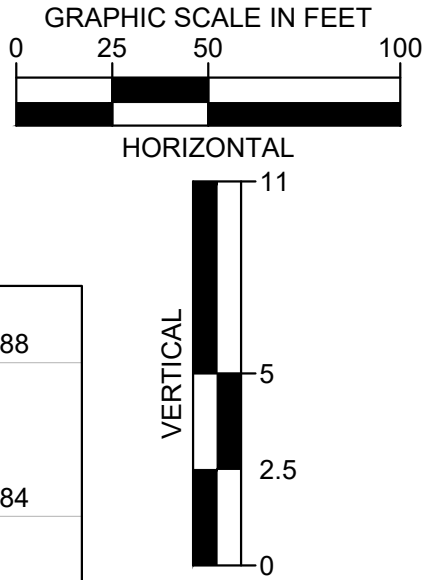
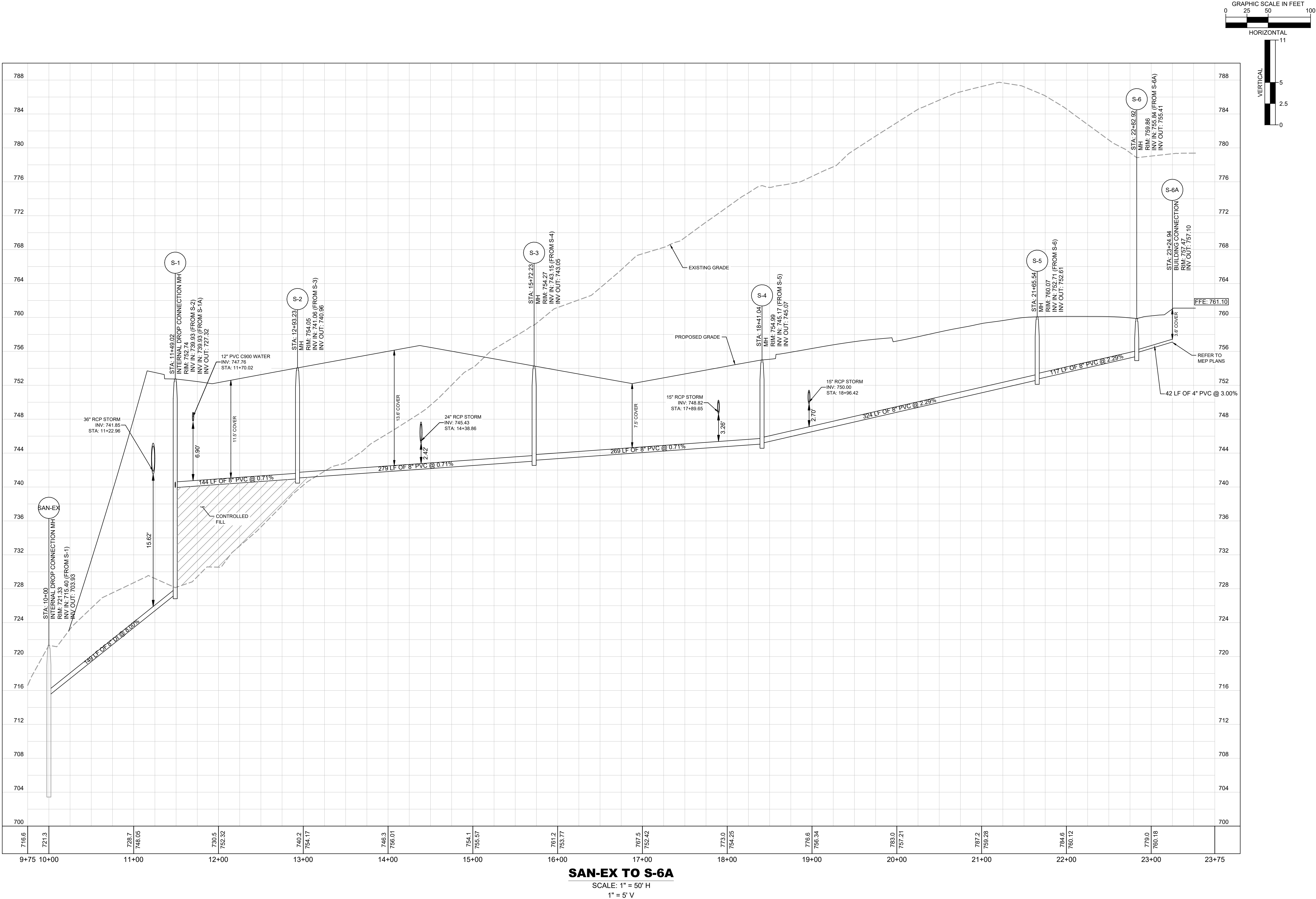
TRANSCONTINENTAL GAS PIPELINE

RIGHT-OF-WAY WORK NOTES

- ONSITE: AN AUTHORIZED WILLIAMS REPRESENTATIVE MUST BE ON SITE PRIOR TO AND DURING ANY SURFACE DISTURBING WORK WITHIN THE TRANSCONTINENTAL GAS PIPELINE RIGHT-OF-WAY. THE AUTHORIZED COMPANY WILL ASSIST IN DETERMINING THE LOCATION OF THE PIPELINES, THE ROW WIDTH, AND THE EXISTING COVER OVER THE PIPELINE AND WILL REMAIN ON SITE TO MONITOR ALL ACTIVITIES WITHIN THE ROW.
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- CROSSING ANGLE: ROADS AND UTILITIES SHALL CROSS AS CLOSE TO 90° AS POSSIBLE.
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Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CU-201 SEWER PROFILES November 05, 2025 04:50:37pm
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SAN-EX TO S-6A
SCALE: 1" = 50' H
1" = 5' V

PROJECT HERCULES

SEWER PROFILES

APPOMATTOX COUNTY

VA

Kimley»Horn

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PHONE: 804-673-8882
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COMMONWEALTH OF VIRGINIA

JOSH M MACDONALD

Lic. No. 0402057995

11/14/2025

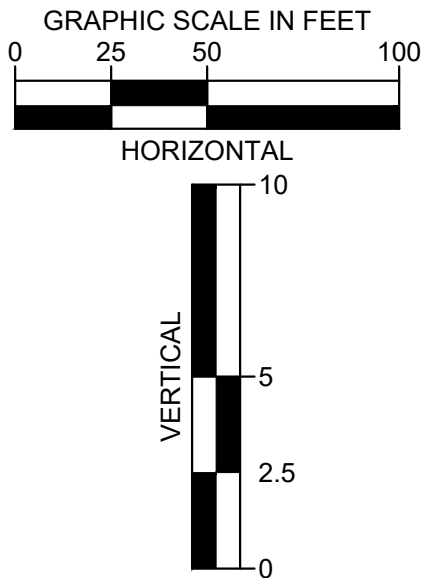
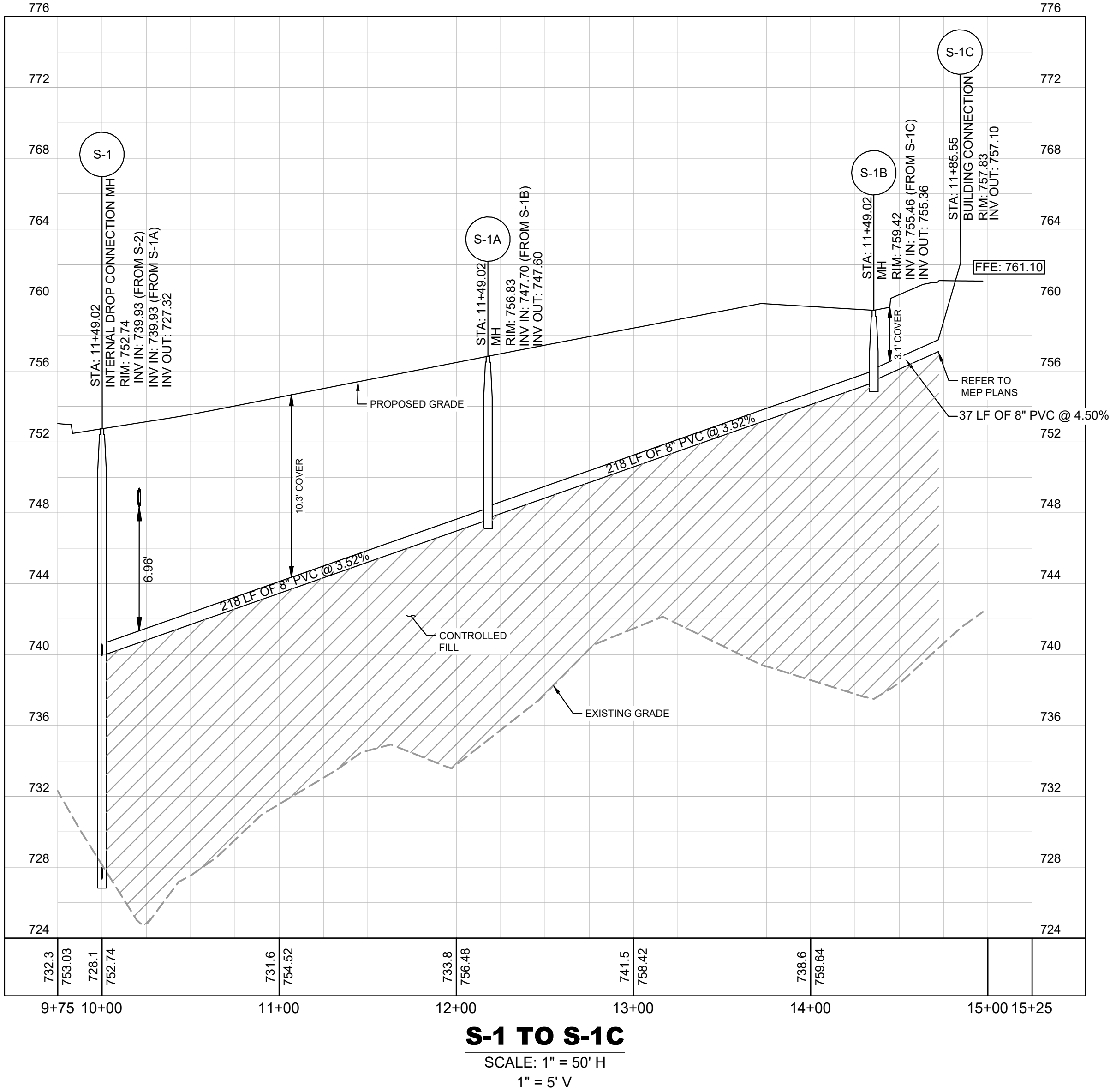
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KHA PROJECT	113706001
DATE	11/14/2025
SCALE	AS SHOWN
DESIGNED BY	STM
DRAWN BY	STM
CHECKED BY	JMM

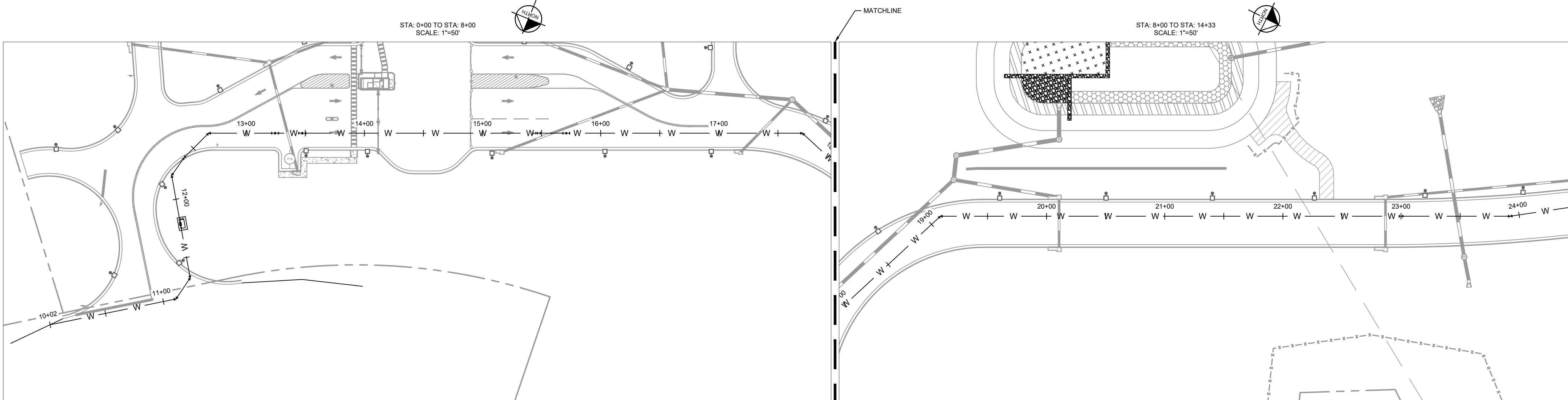
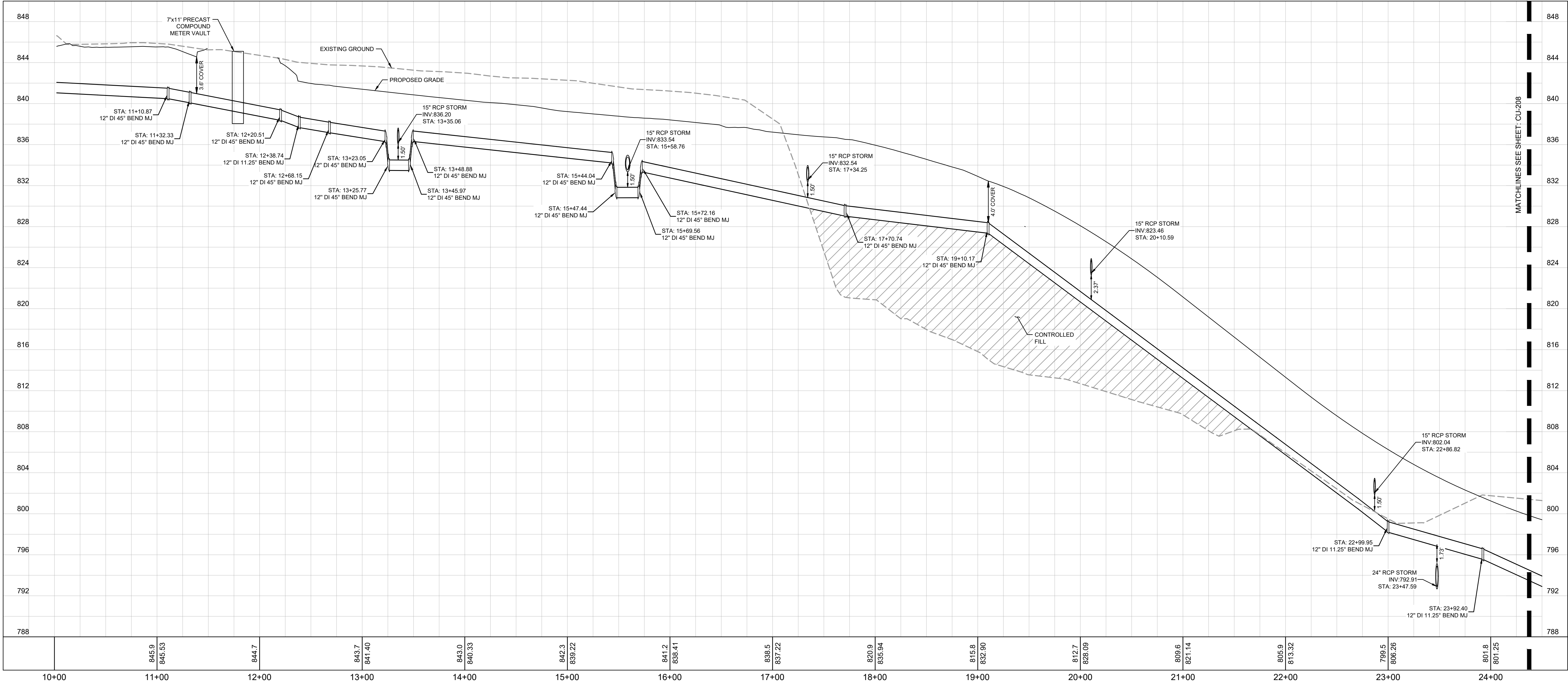
SHEET NUMBER

CU-201

Plotted By:McCray, Stephen Sheet Set:Kha Layout:CU-202 SEWER PROFILES November 05, 2025 04:50:46pm
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KHA PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
113706001	11/14/2025	AS SHOWN	STM	STM	JMM

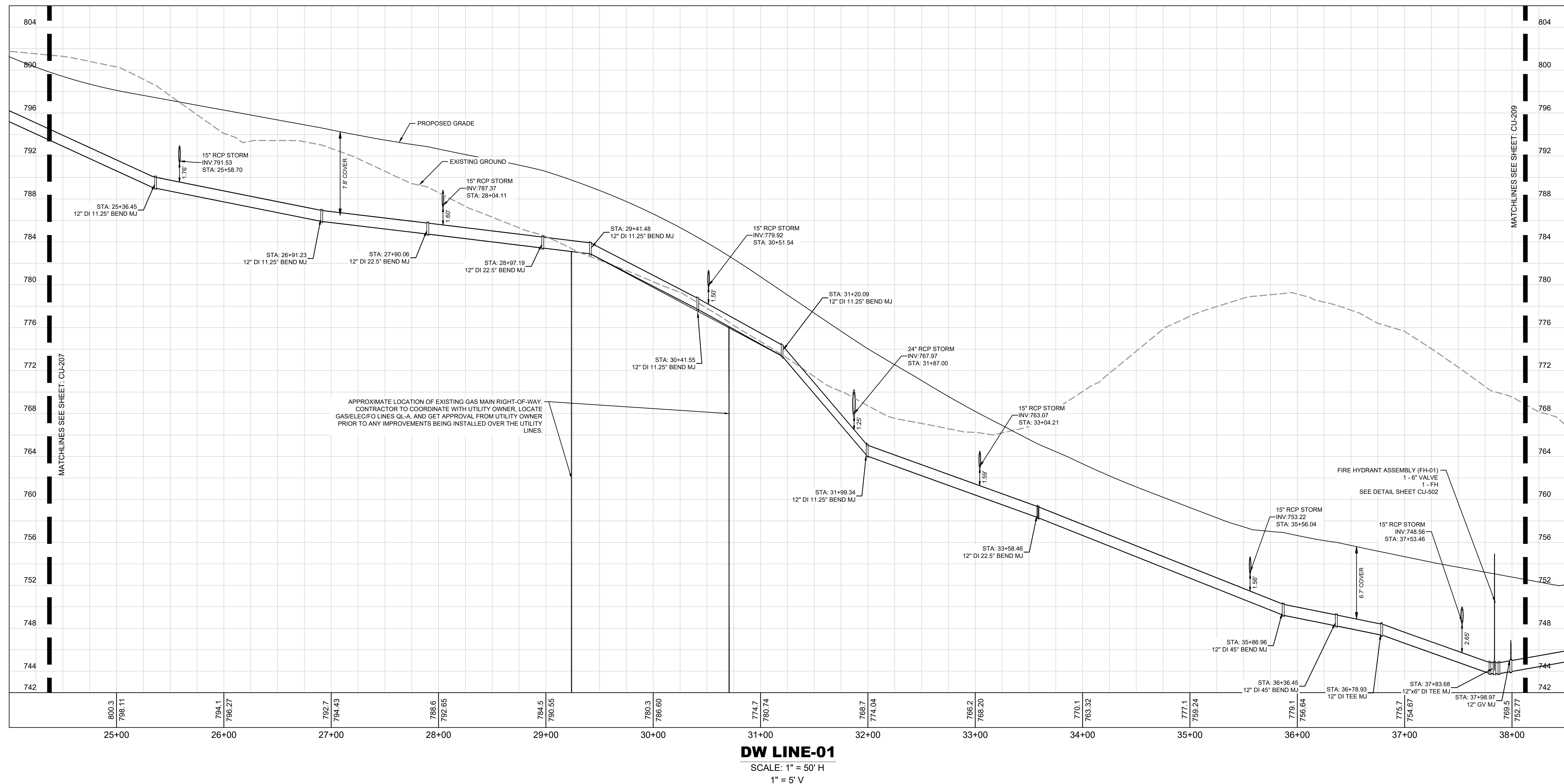
PROJECT HERCULES

APPOMATTOX COUNTY

SHEET NUMBER
CU-207

WATER PROFILES

VA



COMMONWEALTH OF VIRGINIA
Josh M Macdonald
 JOSH M MACDONALD
 Lic. No. 0402057995
 11/14/2025
 PROFESSIONAL ENGINEER

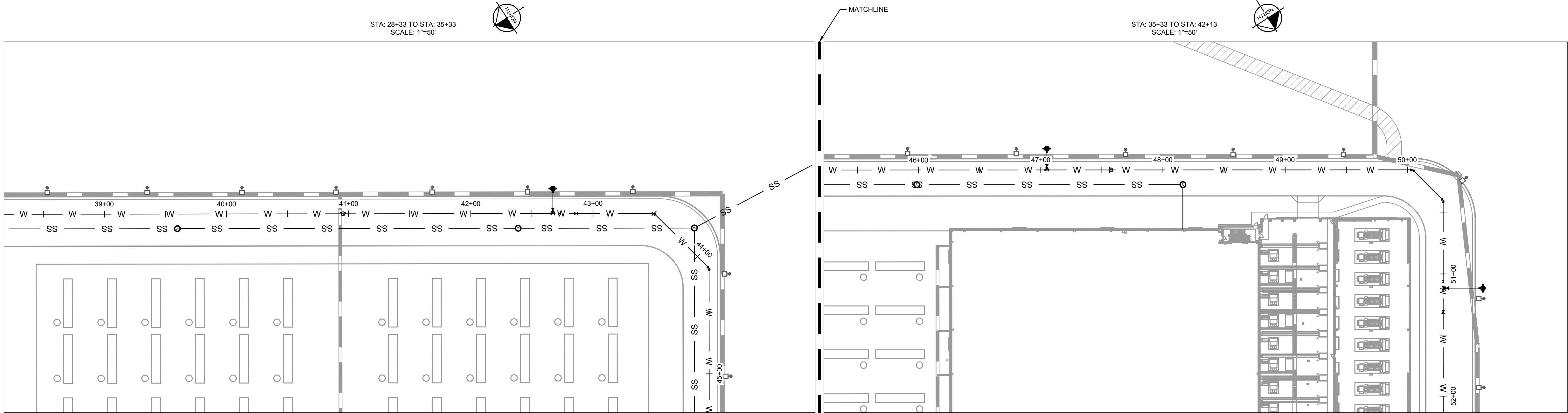
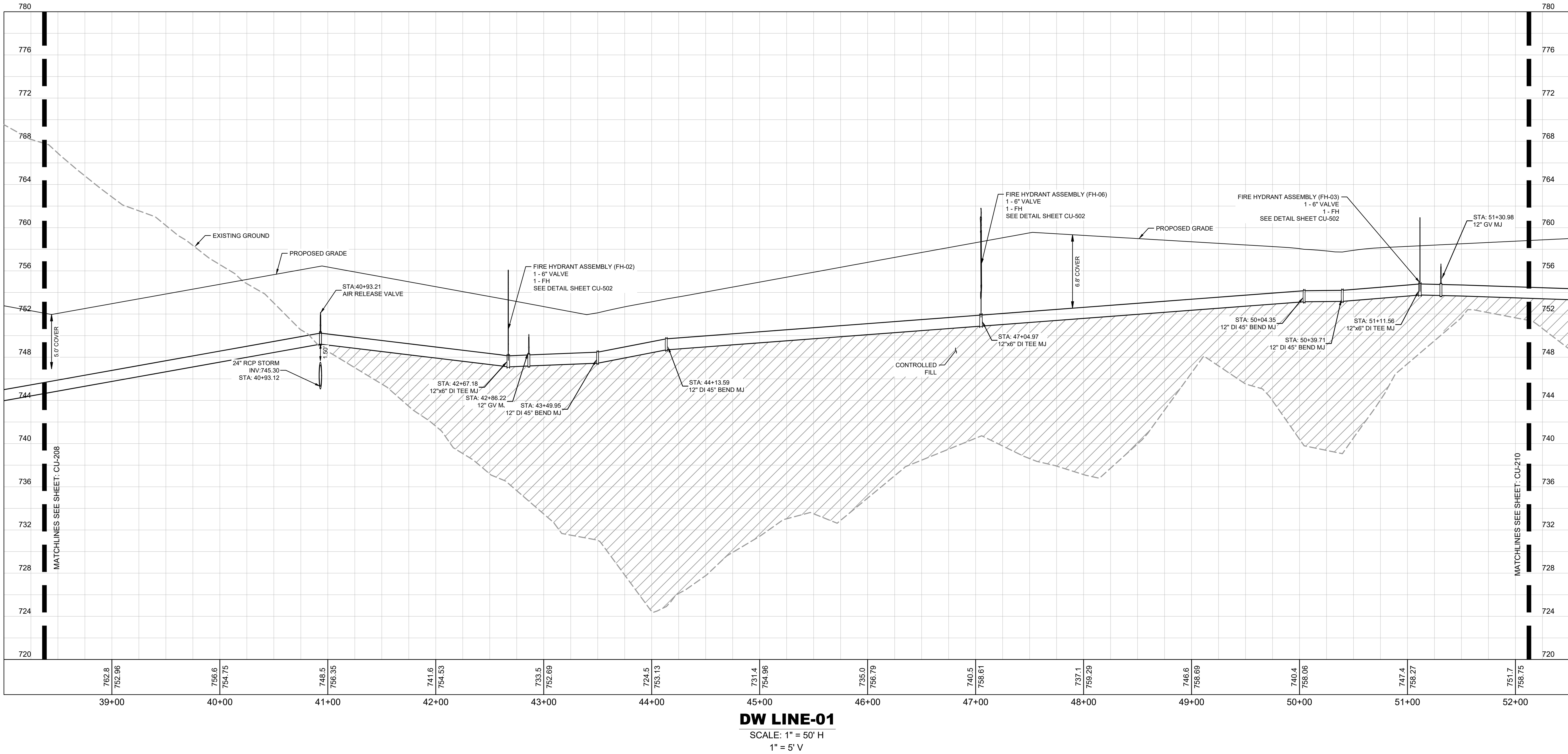
WATER PROFILES

PROJECT HERCULES

Kimley»Horn

Jacobs

Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CU-209 WATER PROFILES November 05, 2025 04:52:17pm
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PROJECT HERCULES

SHEET NUMBER
CU-209

APPOMATTOX COUNTY

VA

WATER PROFILES

KHA PROJECT
113706001

DATE
11/14/2025

SCALE AS SHOWN

DESIGNED BY
STM

DRAWN BY
STM

CHECKED BY
JMM

COMMONWEALTH OF VIRGINIA

JOSH M MACDONALD

Lic. No. 0402057995

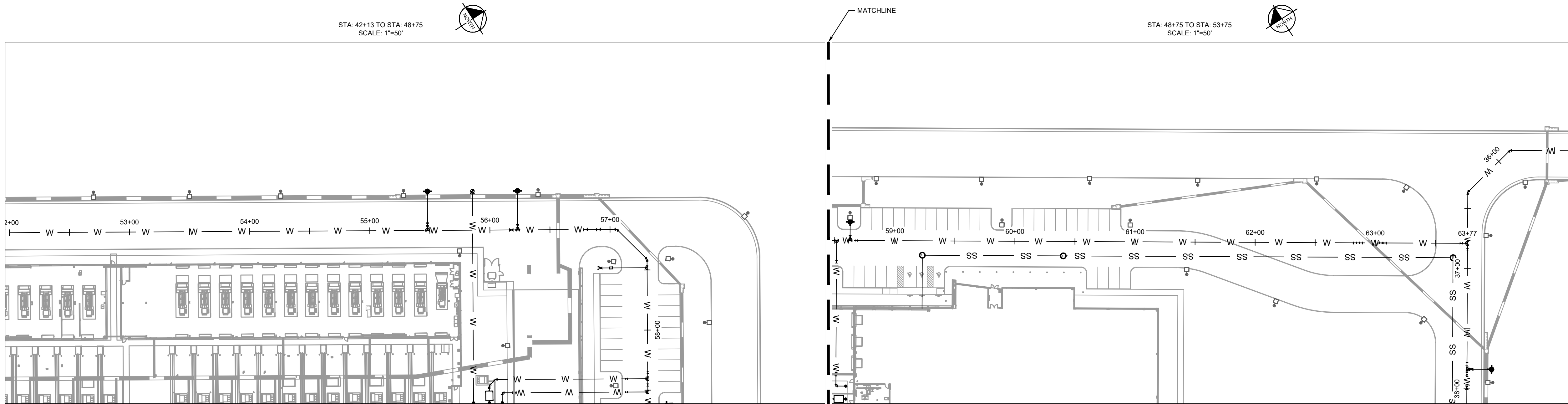
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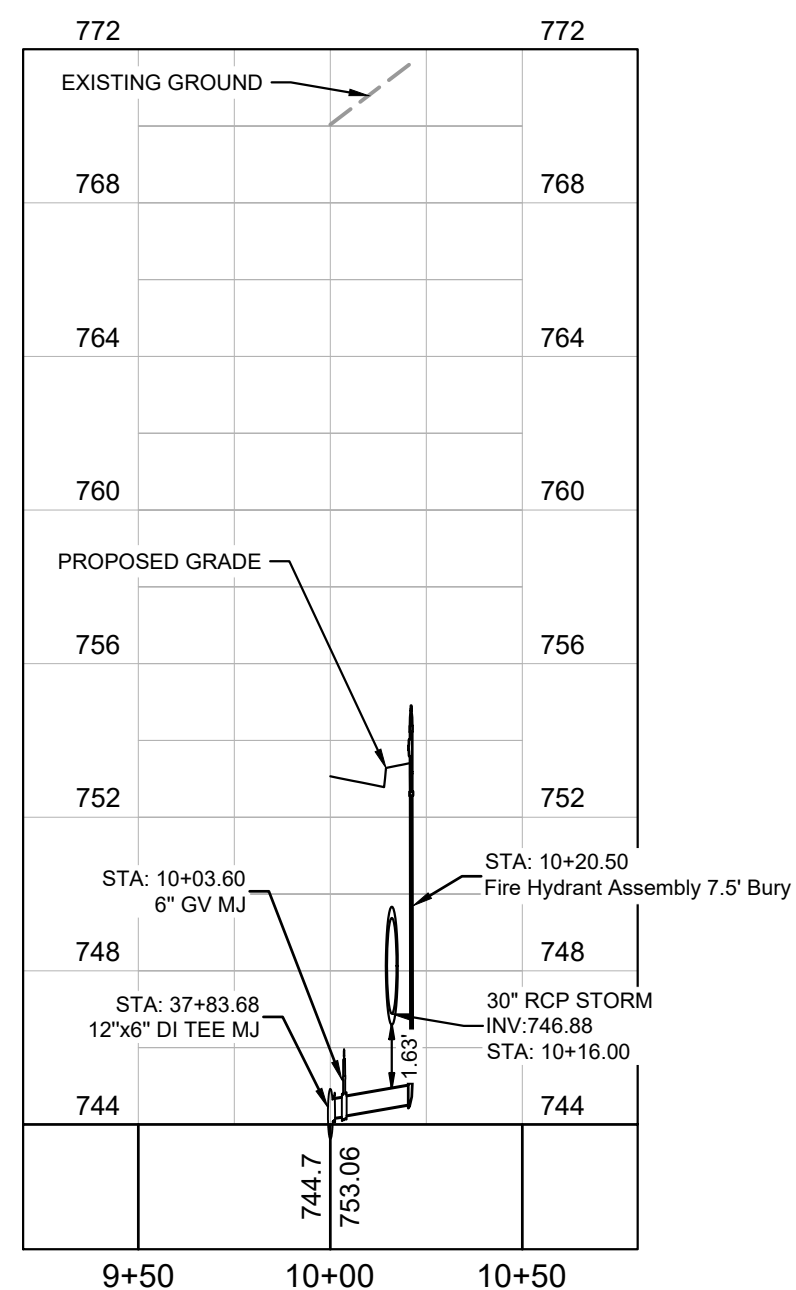
PROFESSIONAL ENGINEER

Kimley»Horn

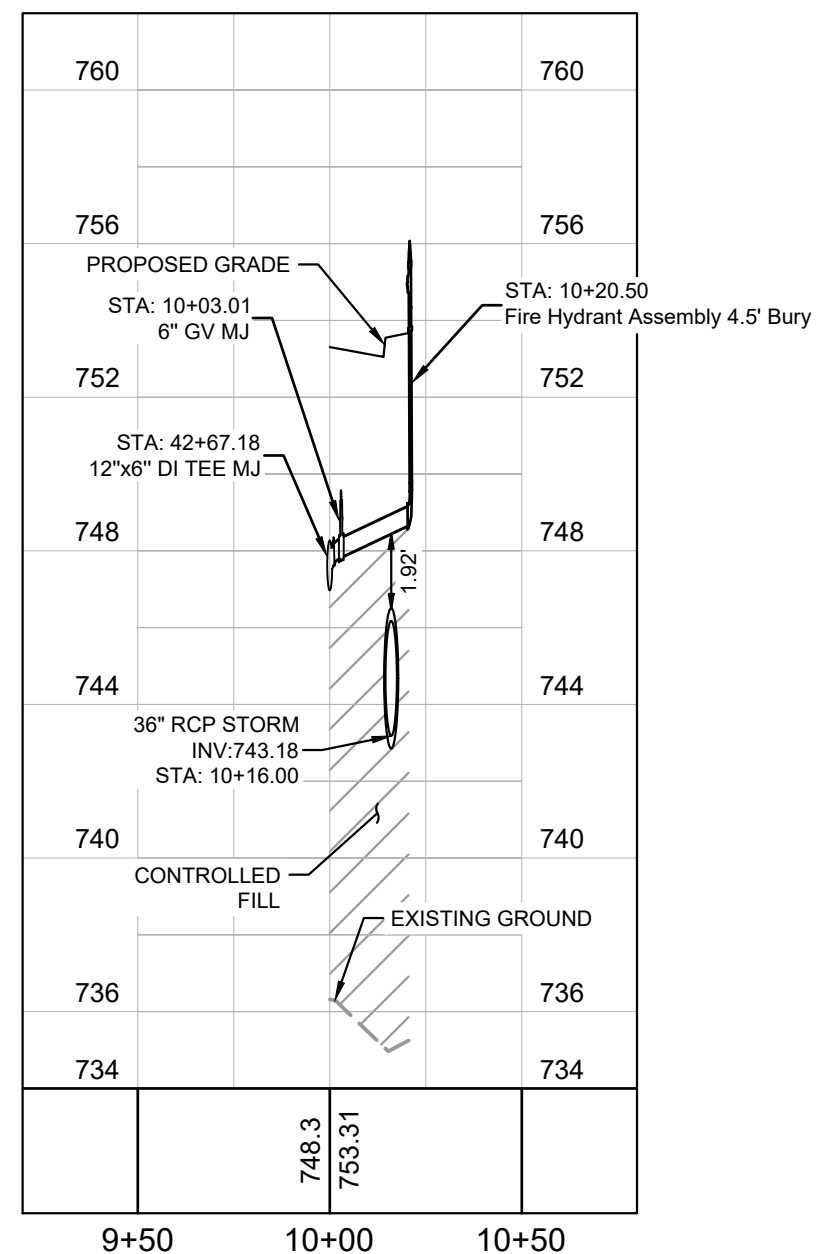
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Jacobs

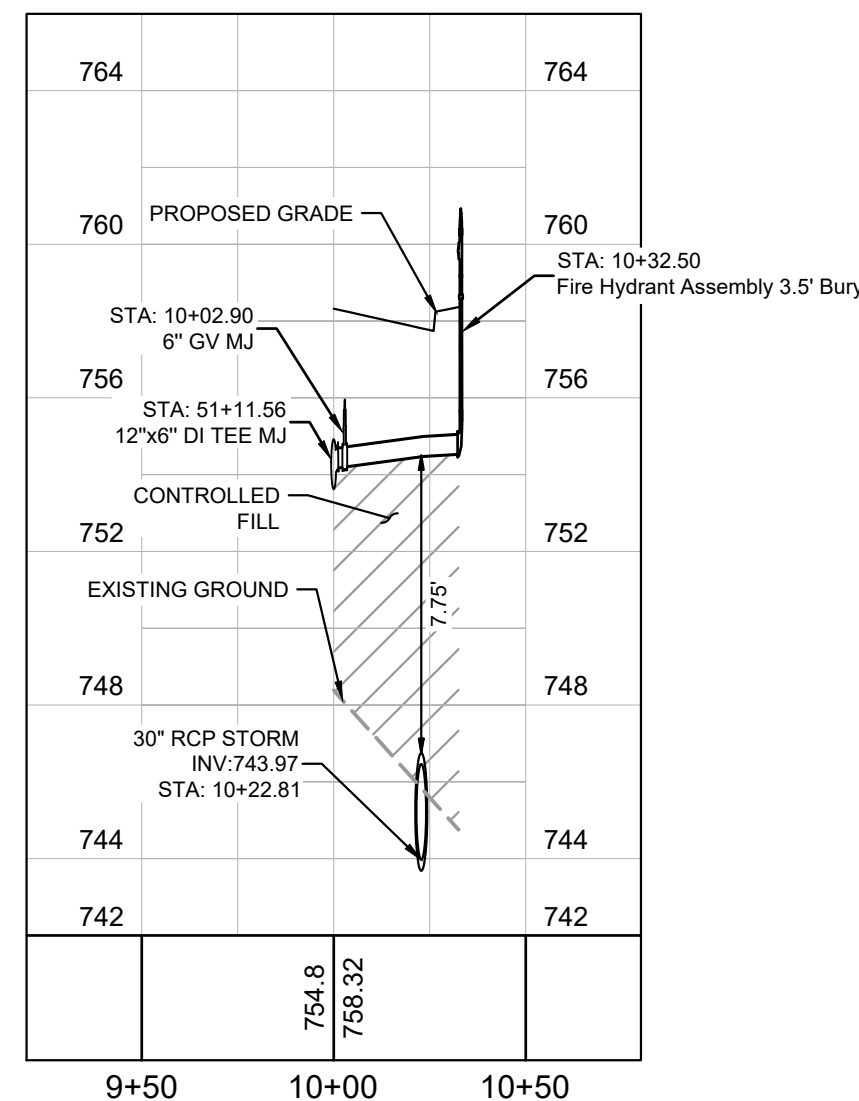




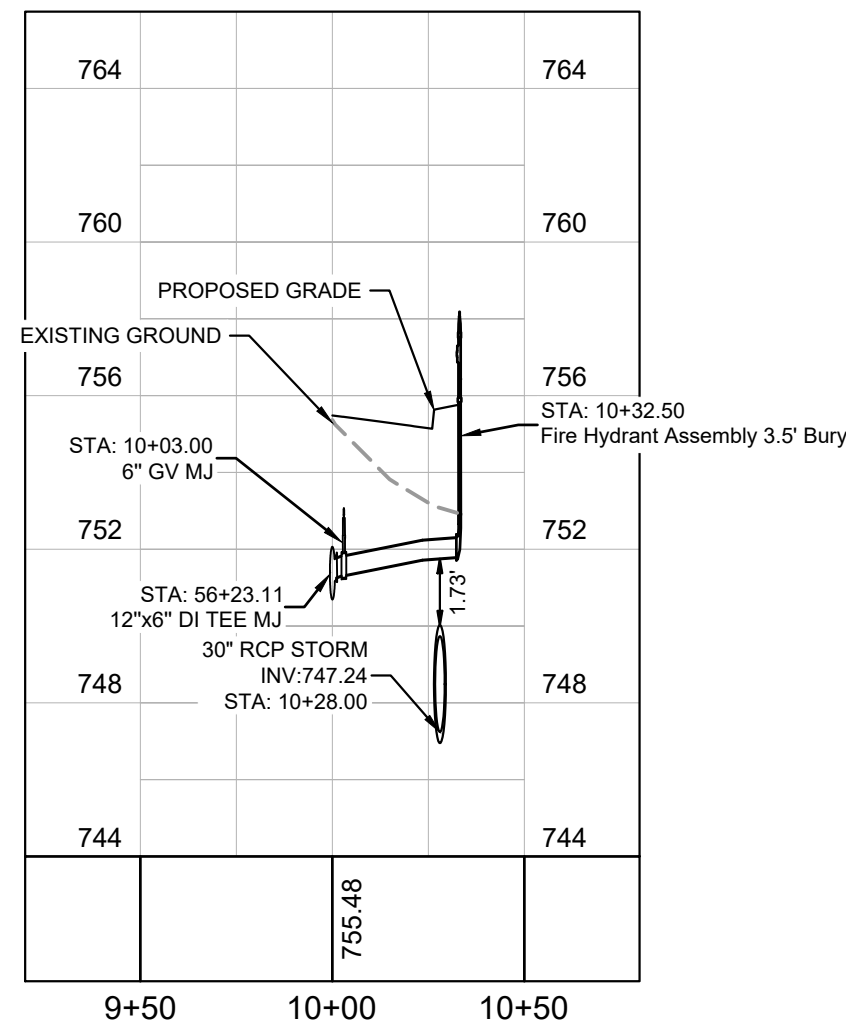
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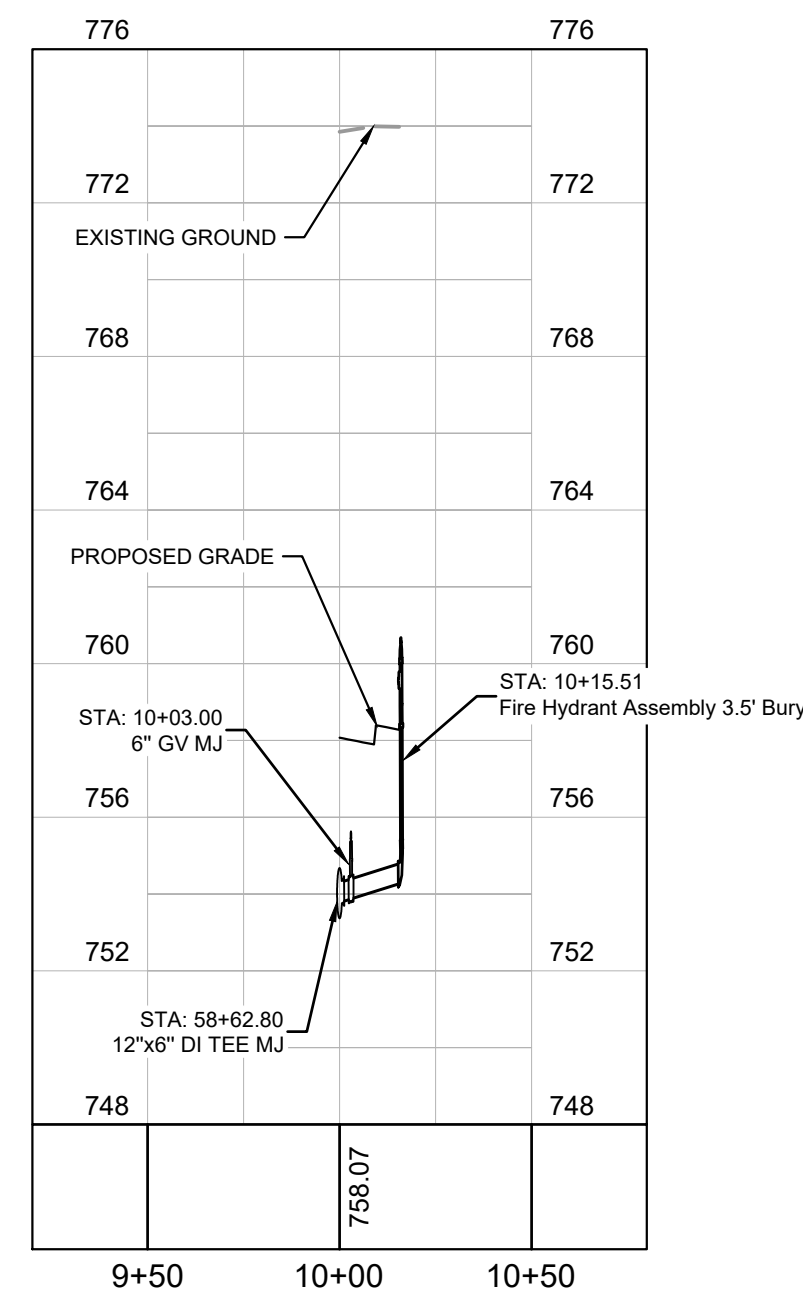
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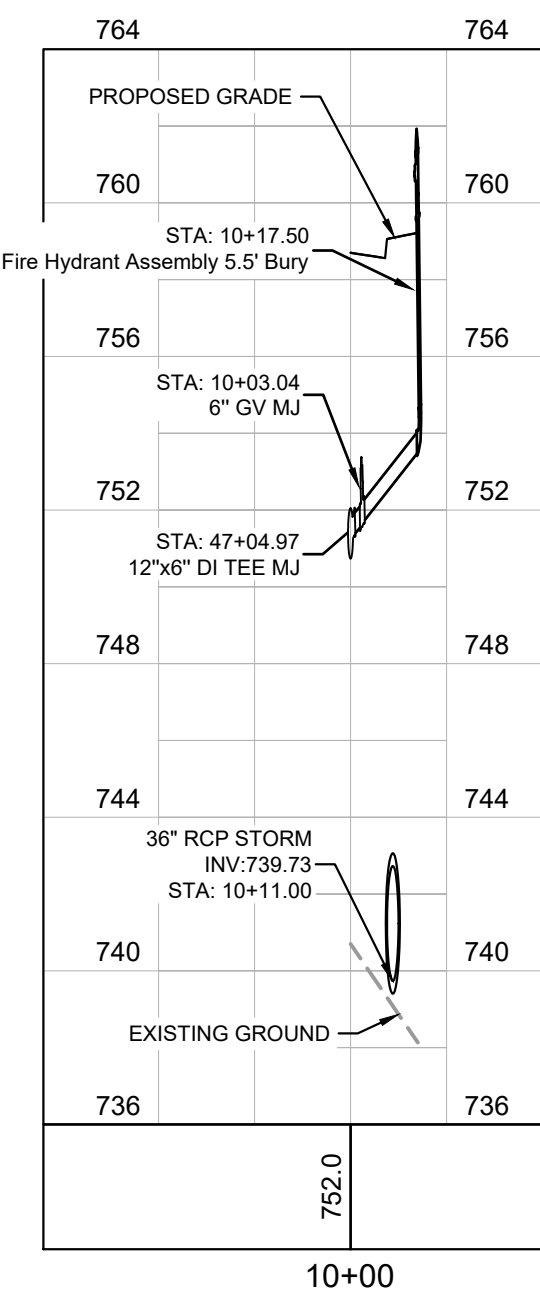
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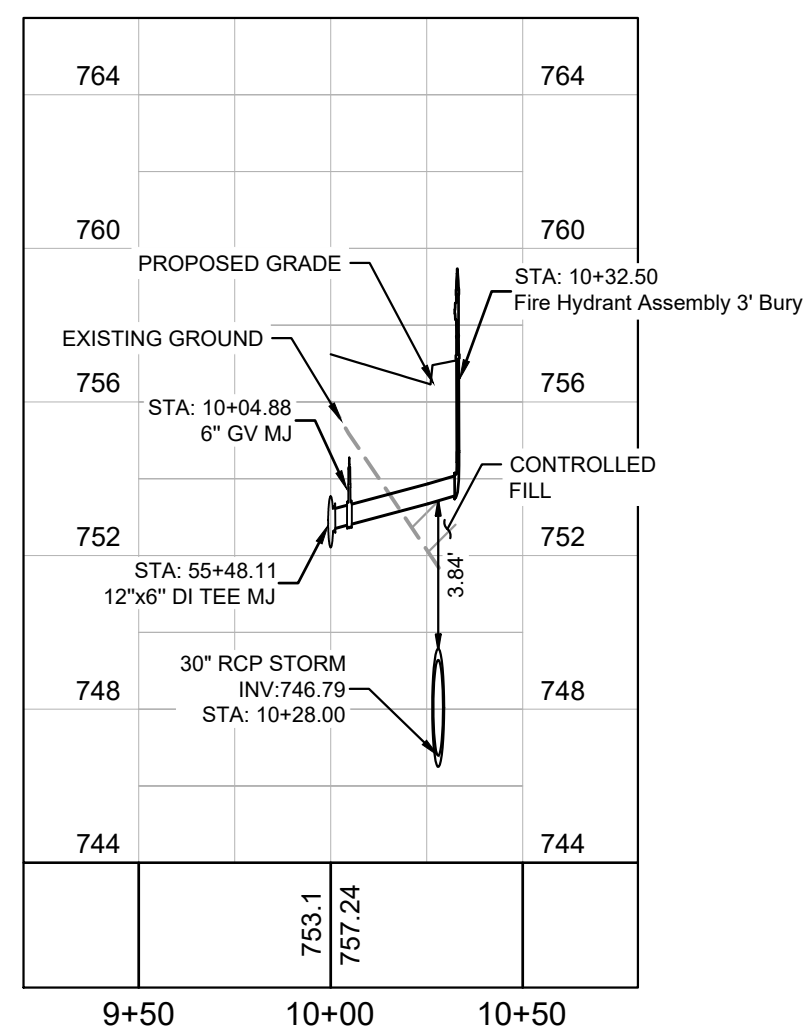
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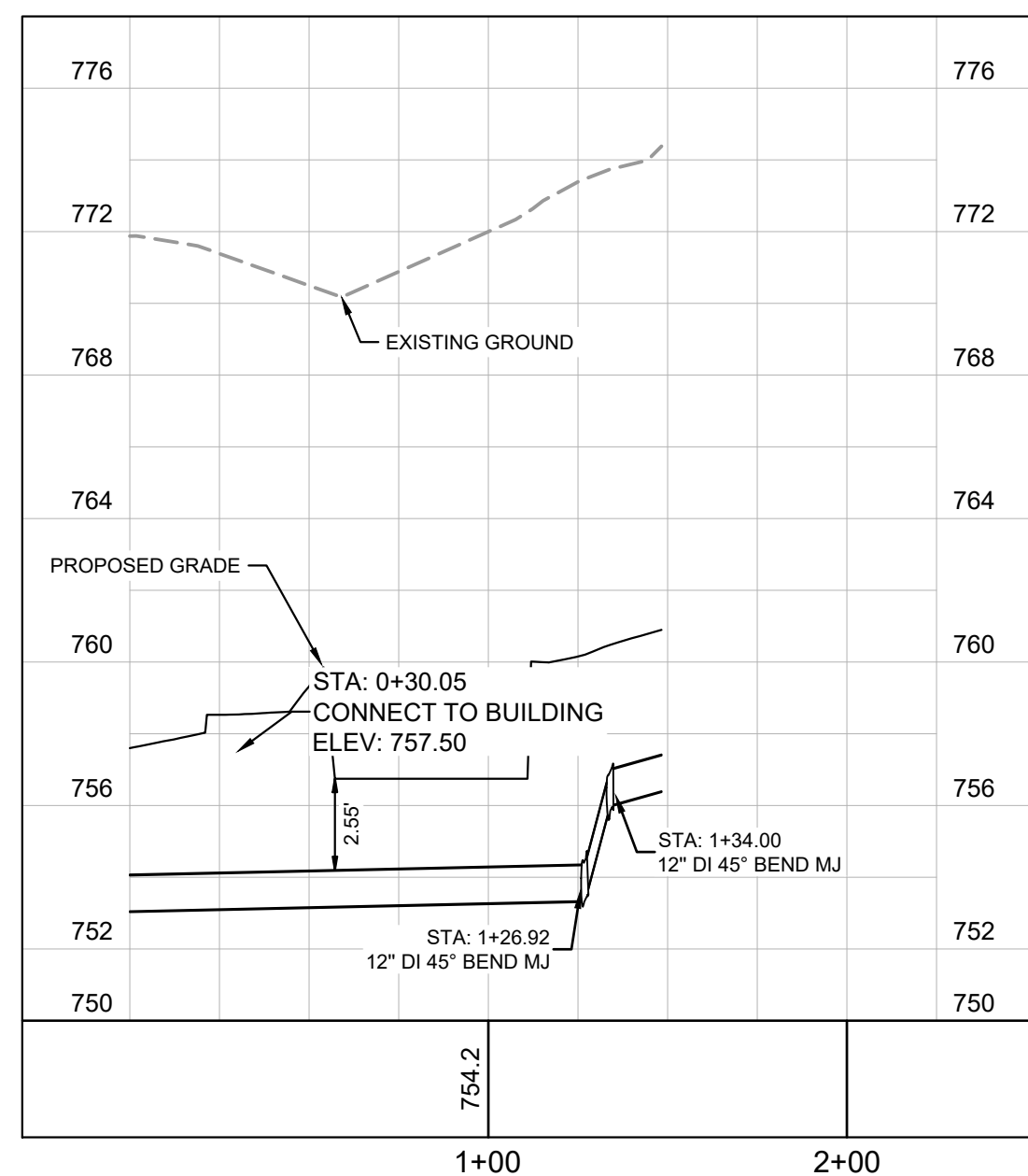
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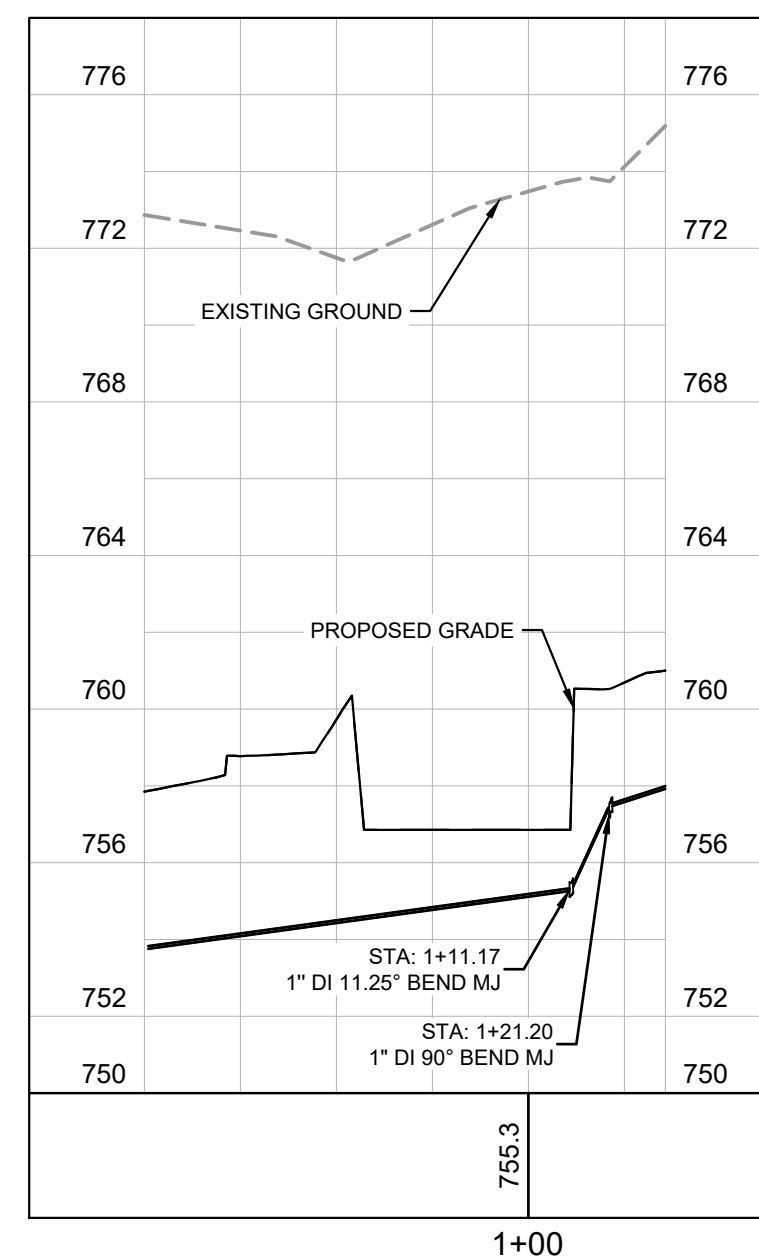
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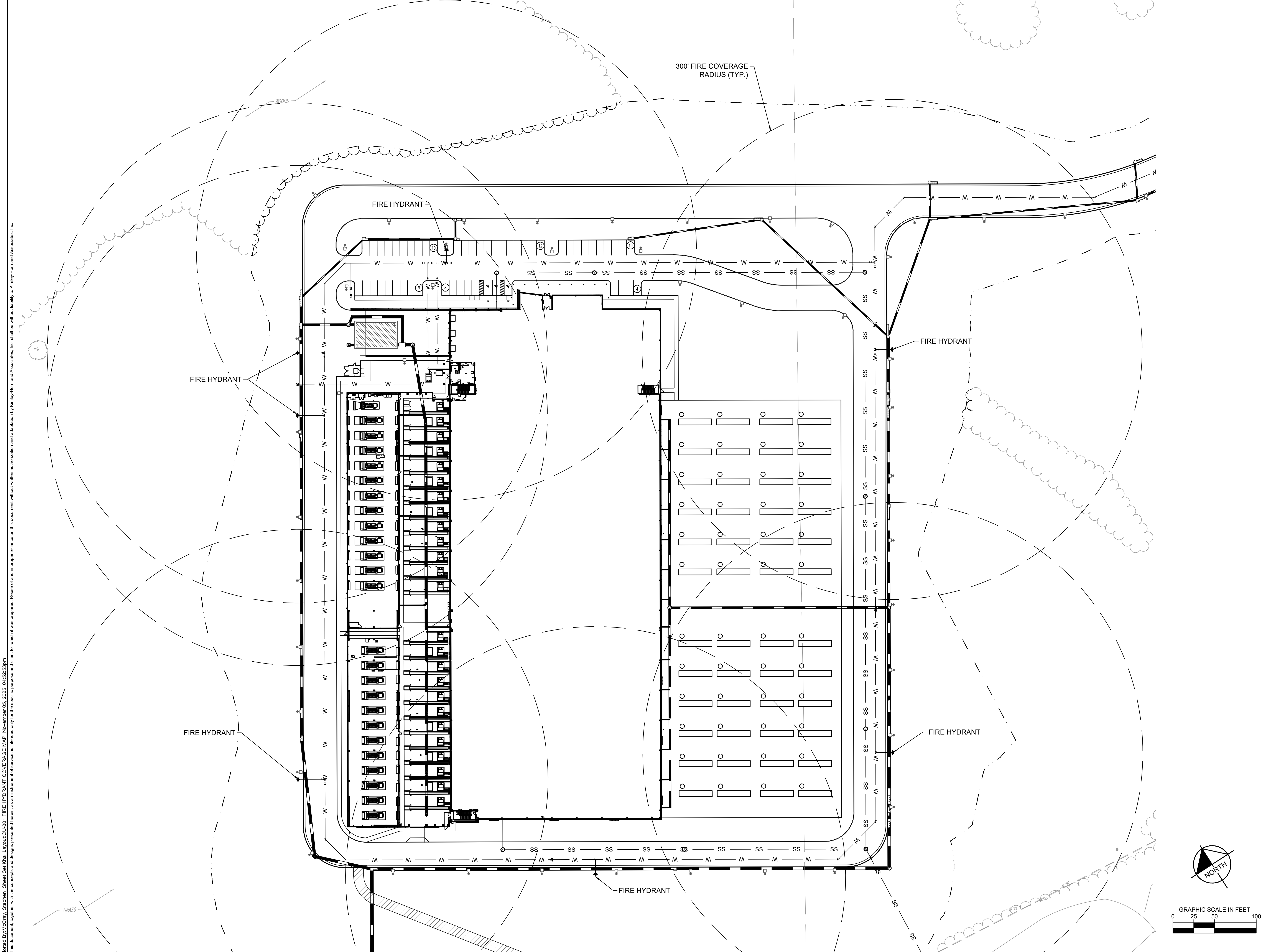
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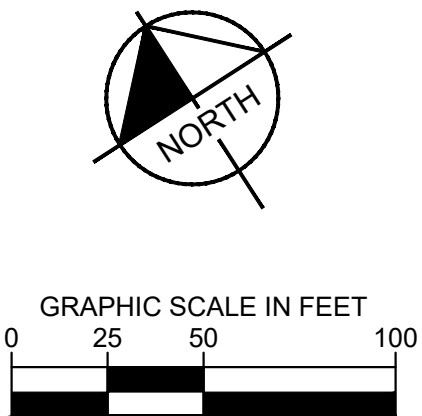
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IR-01
SCALE: 1" = 50' H
1" = 5' V



Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CU-301 FIRE HYDRANT COVERAGE MAP November 05, 2025 04:52:53pm
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PROJECT HERCULES

SHEET NUMBER
CU-301

APPOMATTOX COUNTY

VA

FIRE HYDRANT
COVERAGE MAP

KHA PROJECT
113706001

DATE
11/14/2025

SCALE AS SHOWN

DESIGNED BY STM

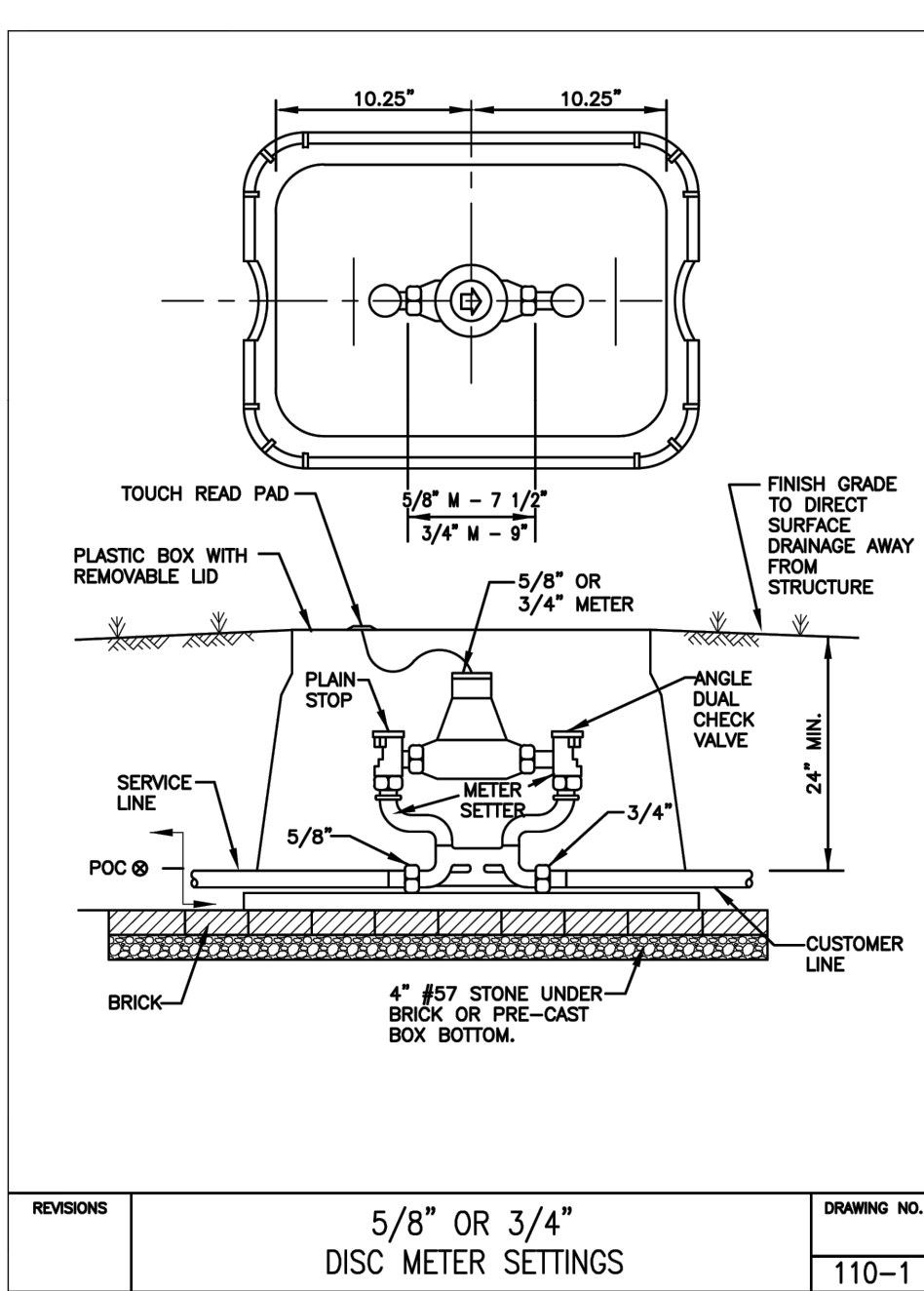
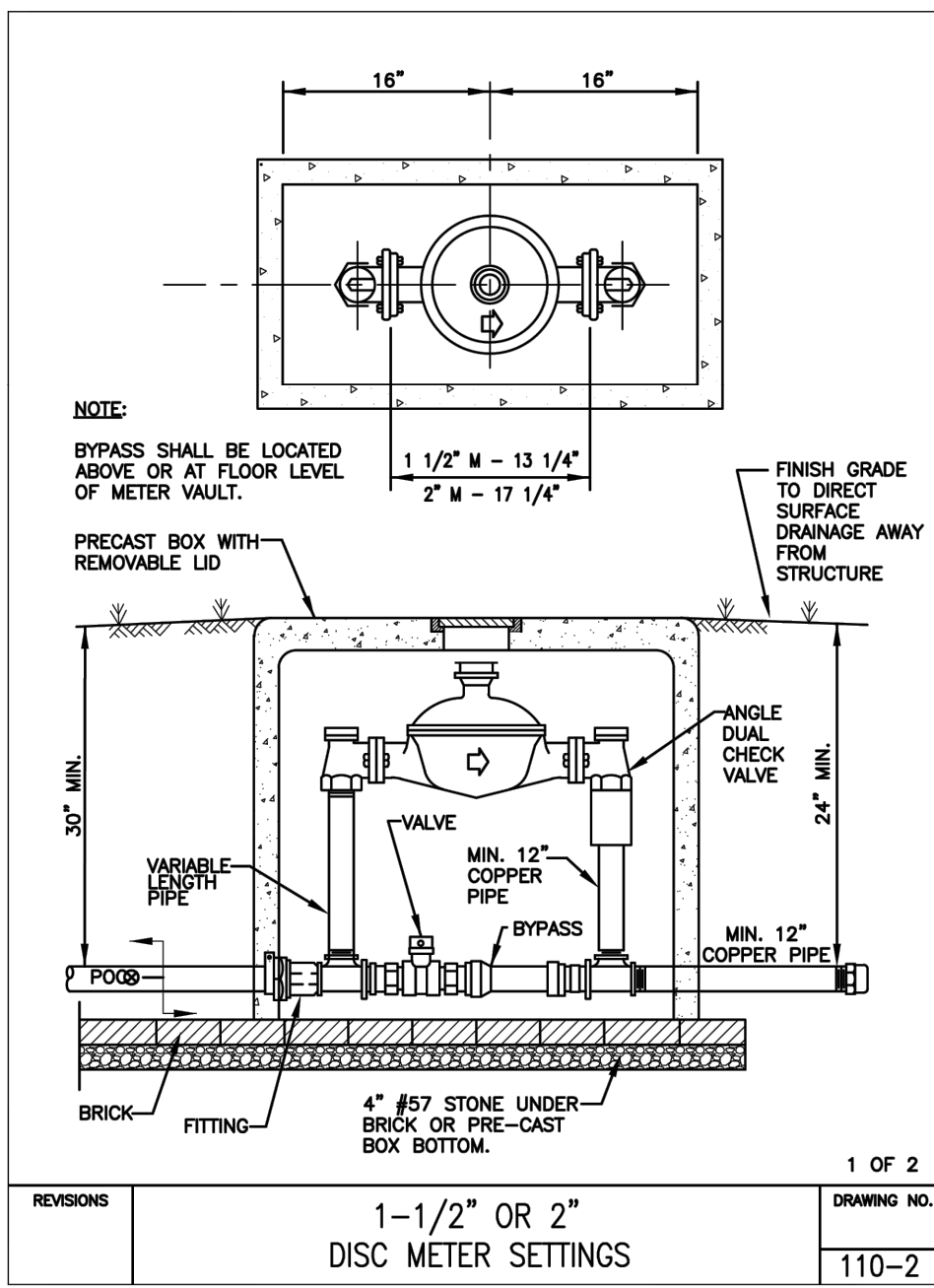
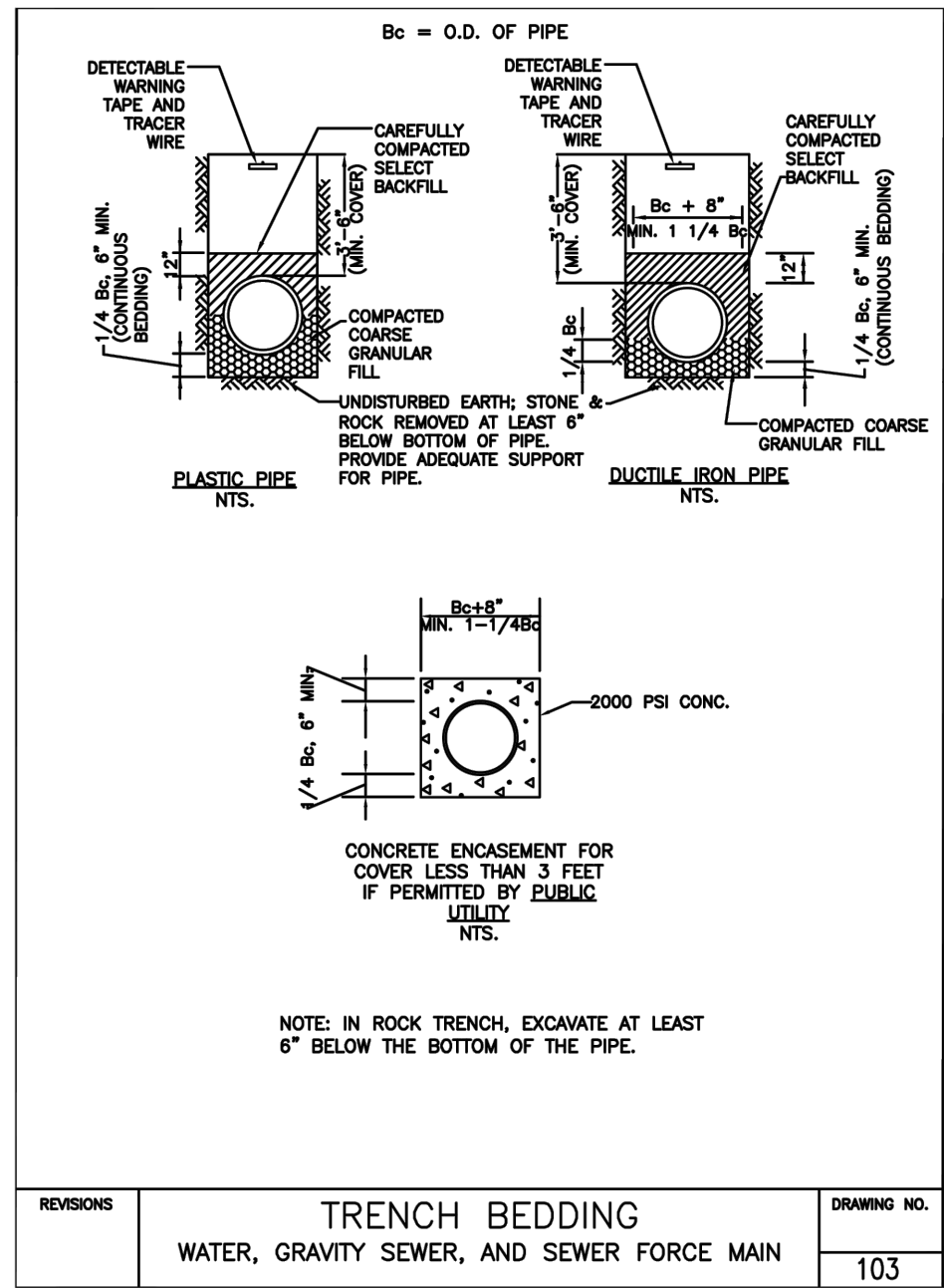
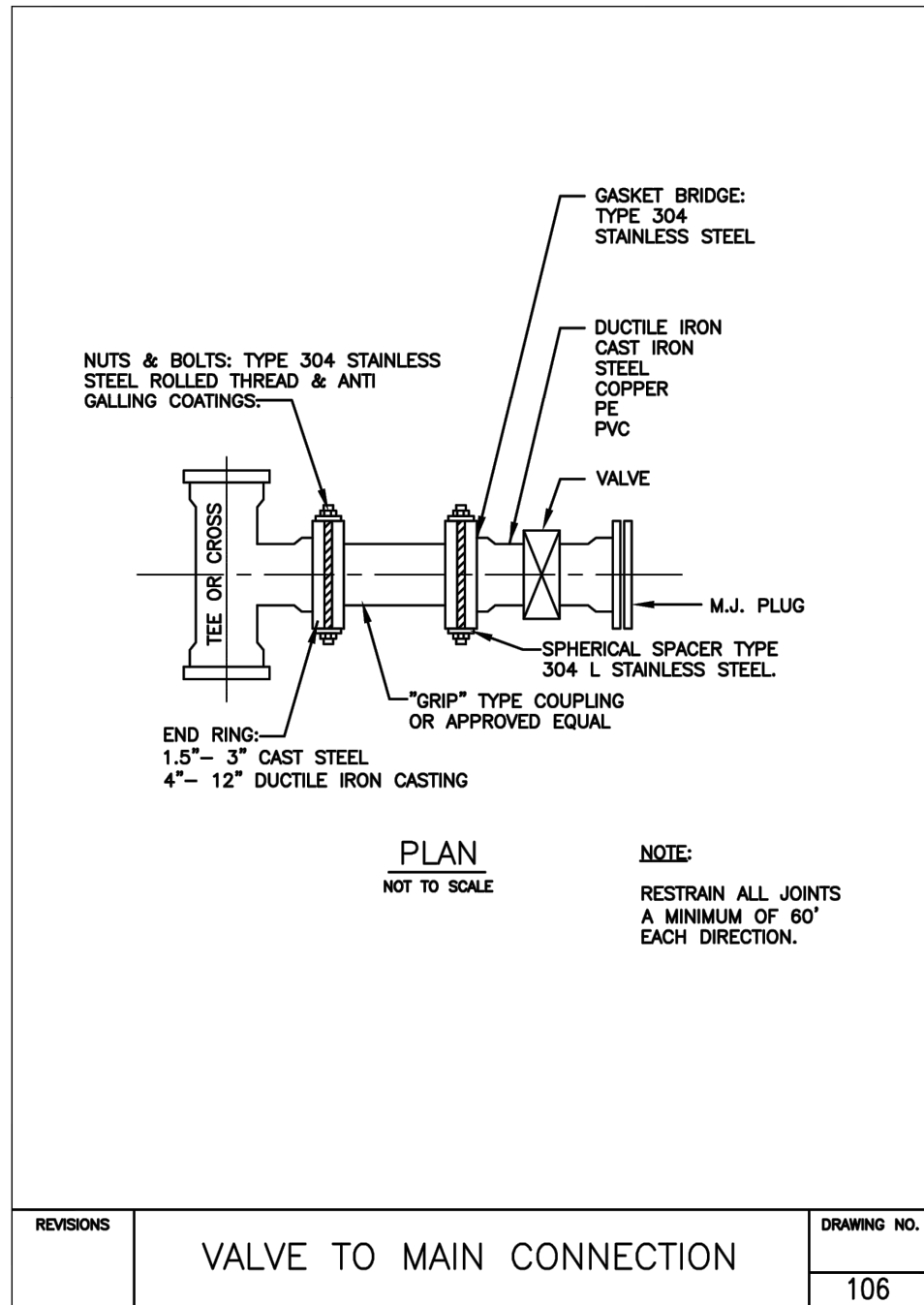
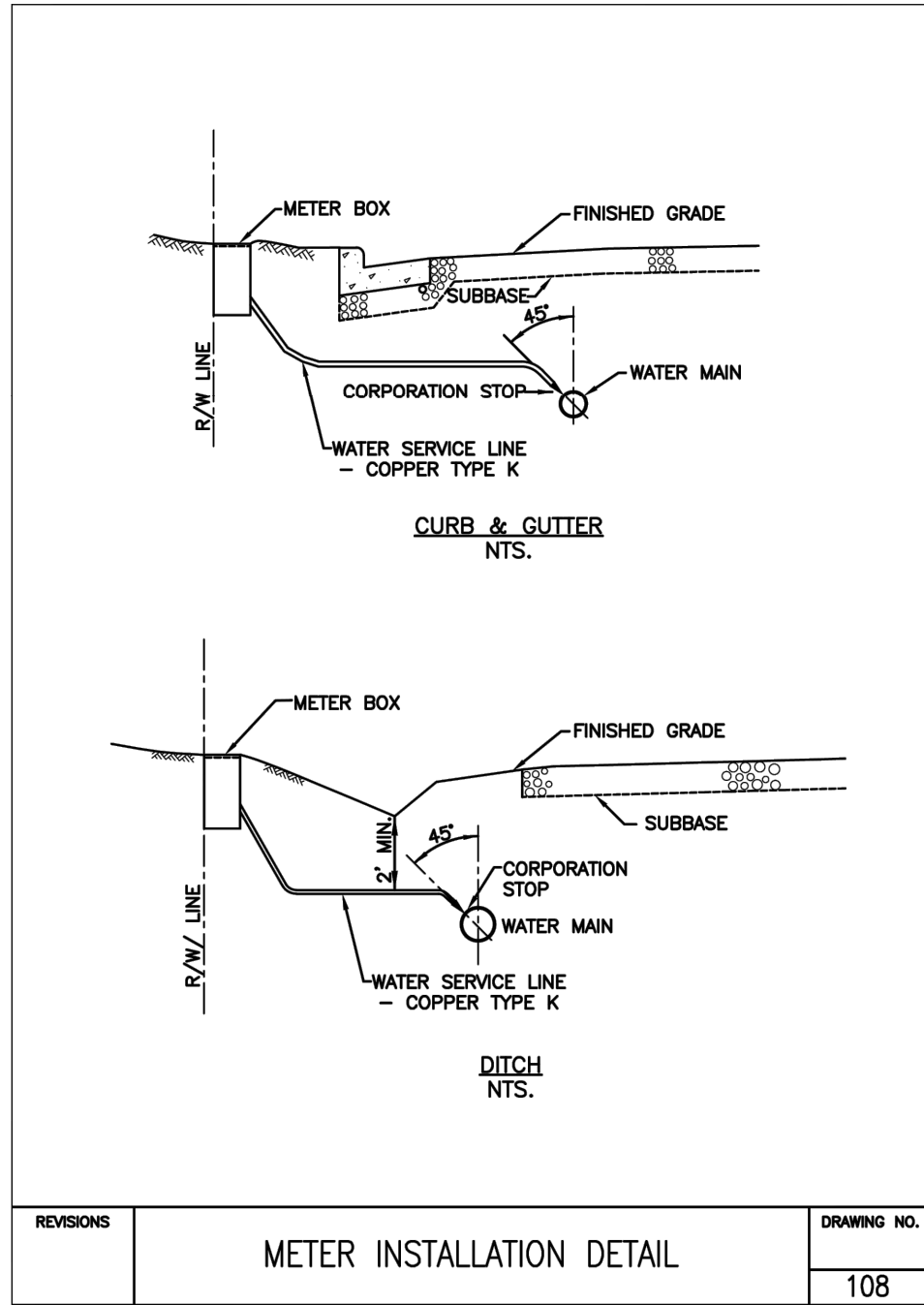
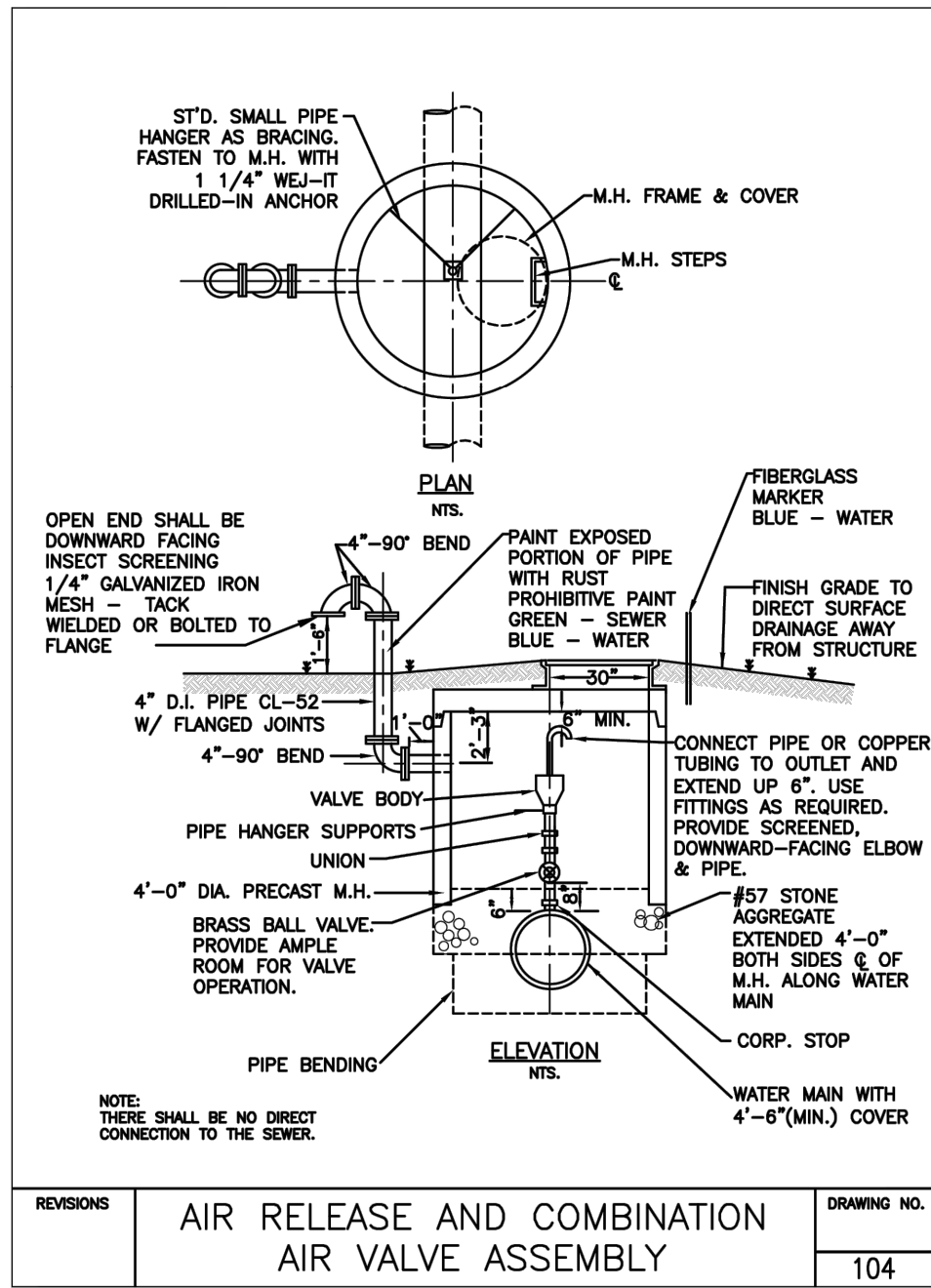
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CHECKED BY JMM

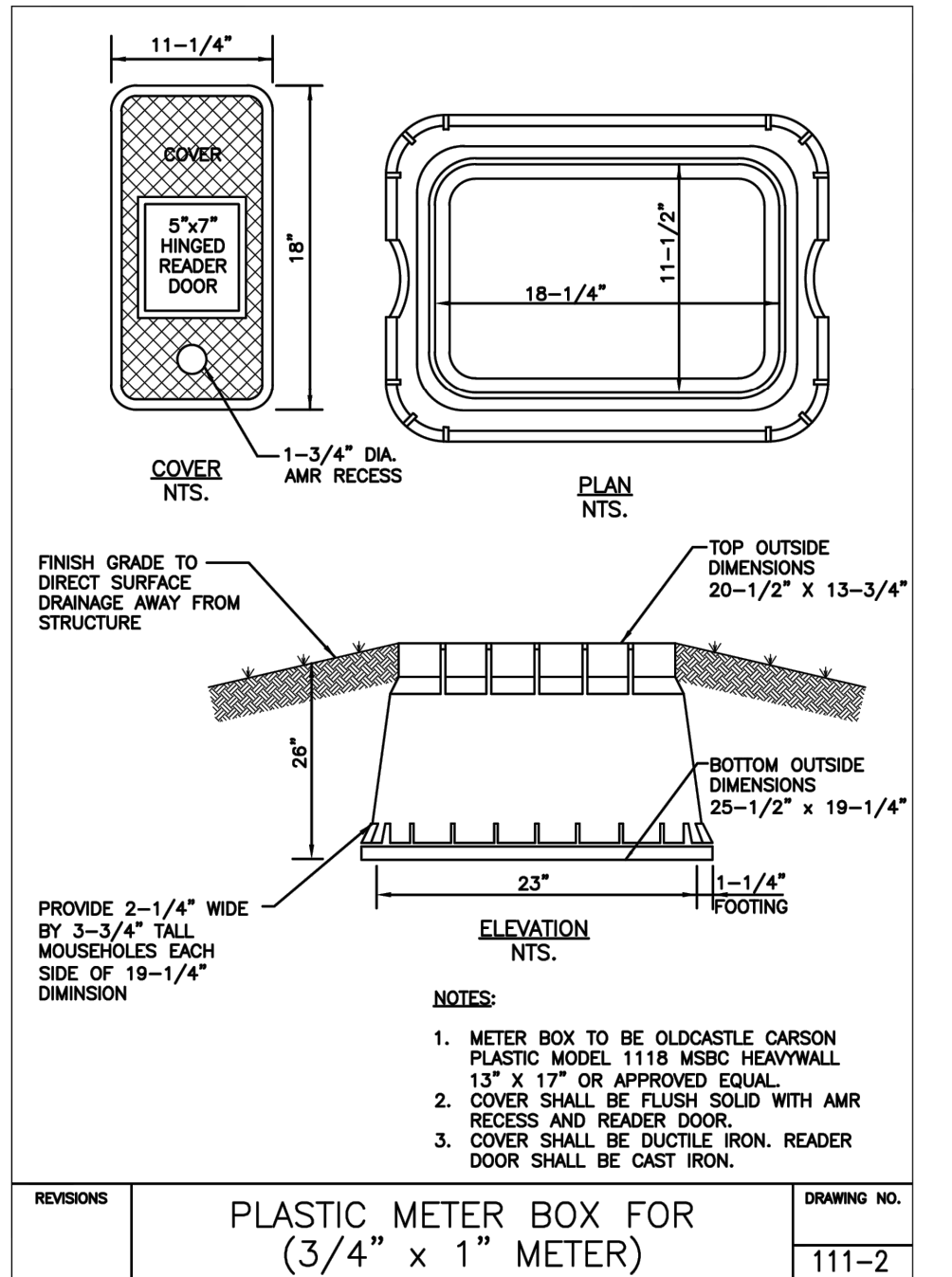
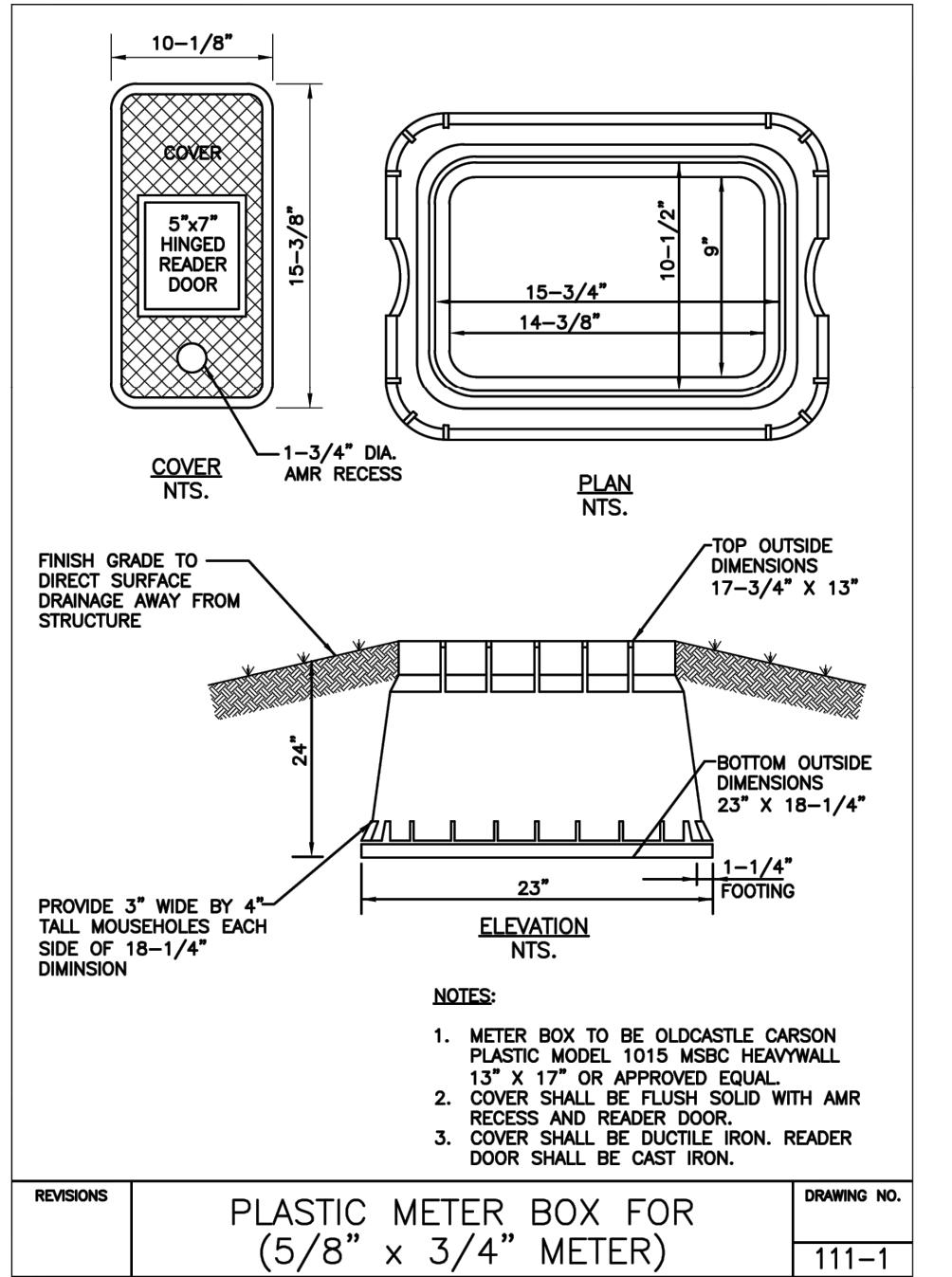
COMMONWEALTH OF VIRGINIA
JOSH M. MACDONALD
Lic. No. 0402057995
11/14/2025
PROFESSIONAL ENGINEER

Kimley-Horn

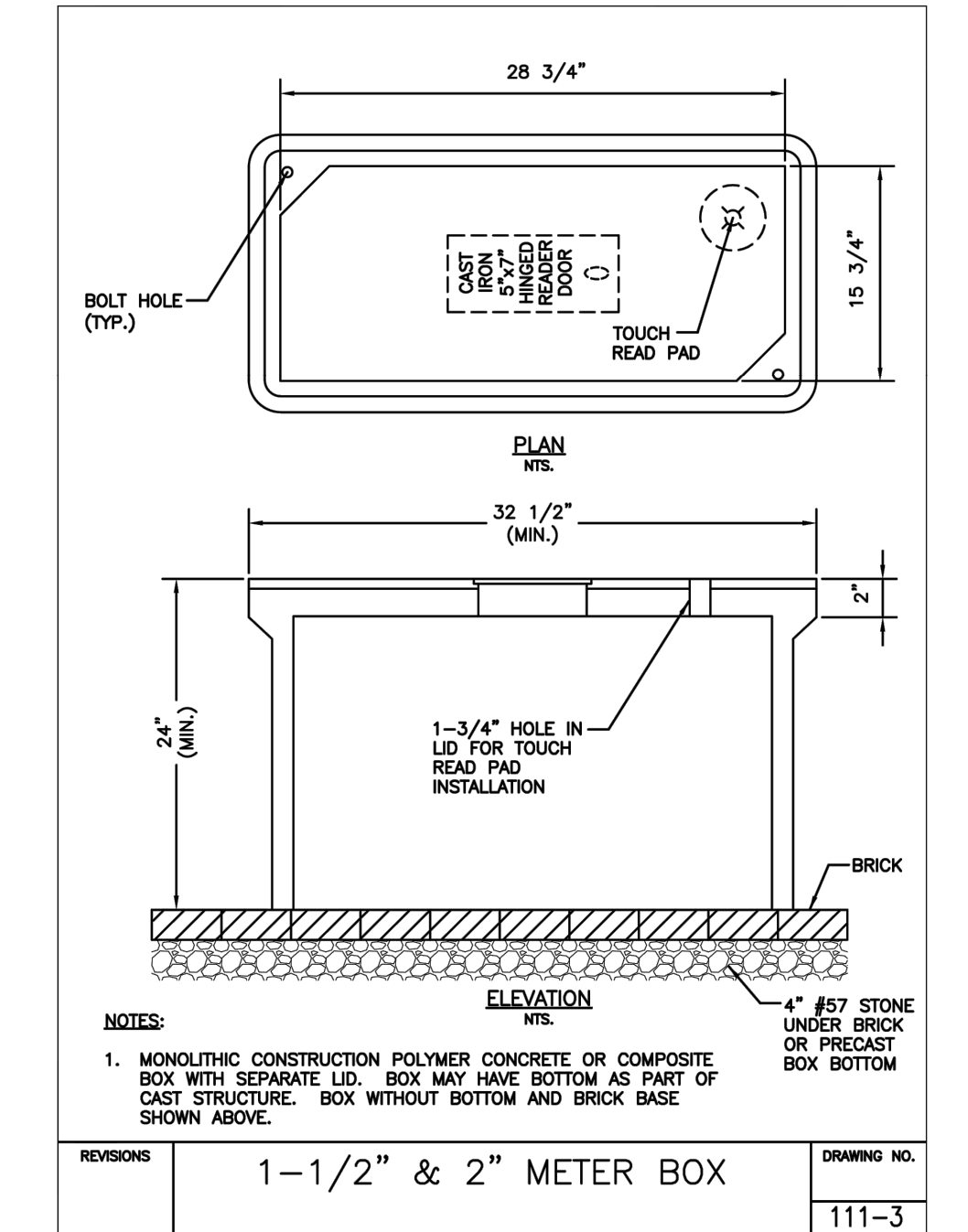
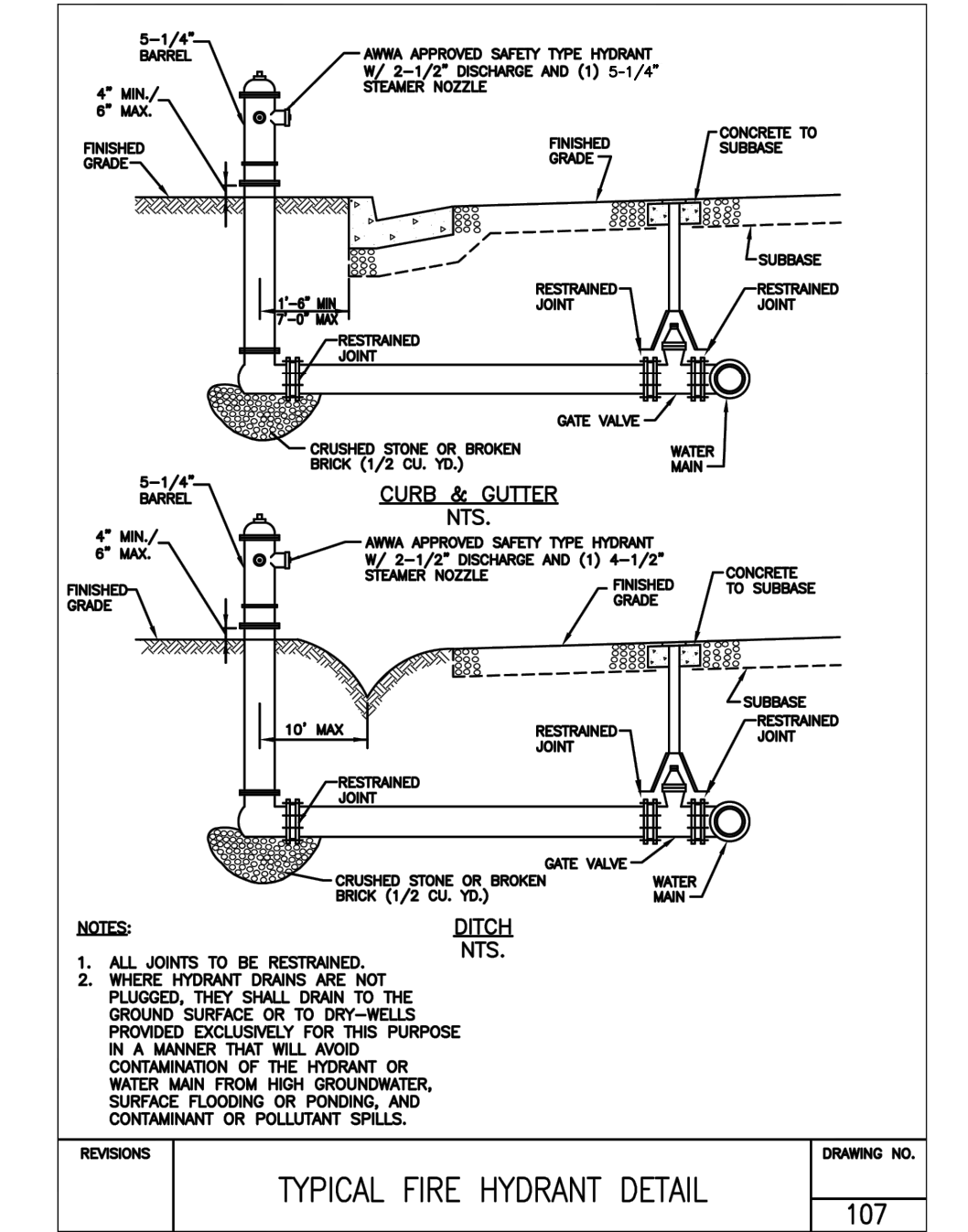
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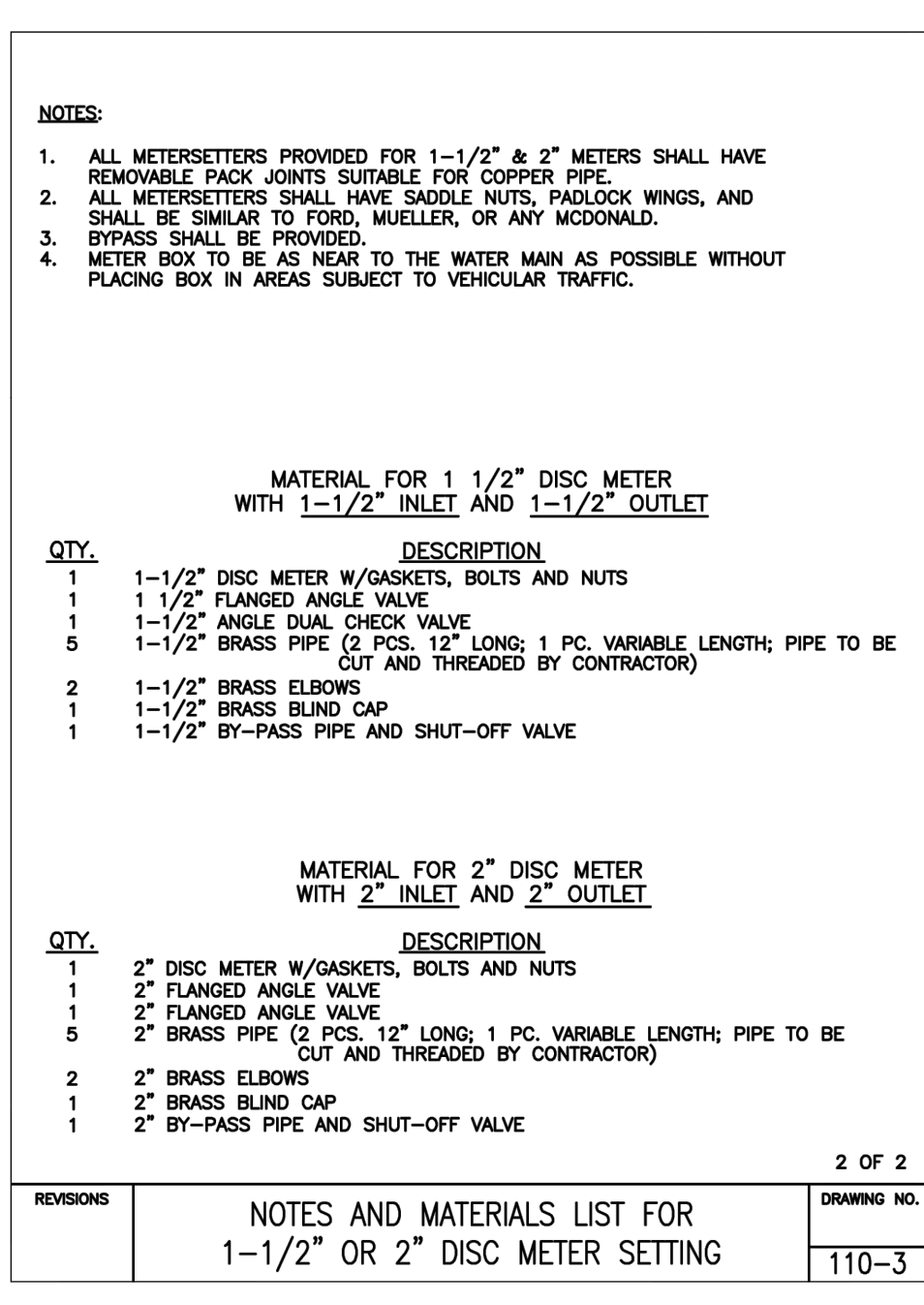
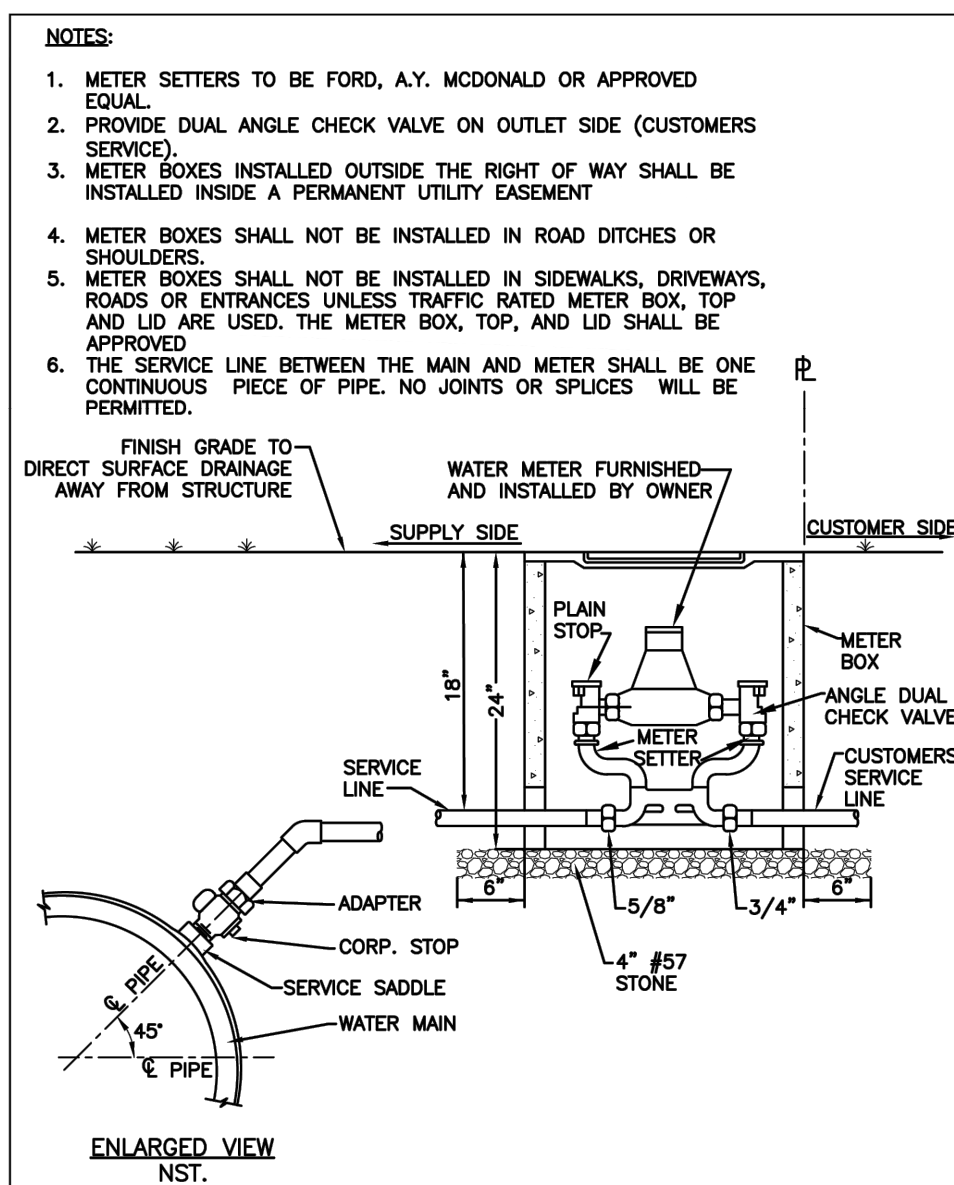
Meter Sizing Form					
Applicant Name:	Josh MacDonald	Date:	7/10/2025		
Address:	6806 Paragon Place, Suite 310, Richmond, VA 23230	Tax Map #	63 A 80		
Building Address:	N/A	Phone #	804-462-9704		
Project Hercules					
Development Name:	Flatten Value @ 35 gpm	No. of Ex. Fixtures	No. of Prop. Fixtures	Flatten Value	
Domestic Demand					
Fixtures					
Bathroom	10	4		40	
Kitchen Sink	10	1		10	
Laundry	10	1		10	
Laundry Tray	10	1		10	
Head (Shower Only)	10	1		10	
Service Sink	10	1		10	
Unaid	10	1		10	
Wash Sink (each set of Fixtures)	10	1		10	
Water Closet	10	1		10	
Disinfectant	10	1		10	
Washing Machine	10	1		10	
Hose Connection (Wash Down)	10	1		10	
Hose (go Pt. Wash Down)	10	1		10	
Other					
Combined Fixtures Value Total					
Domestic plus Fire Demand					
Equivalent Fixed Flow for Domestic Fixtures					
Fixed Flow					
Total Flow					
I certify that the information on this form is true and correct.					
Applicant's Signature					
January 2024					



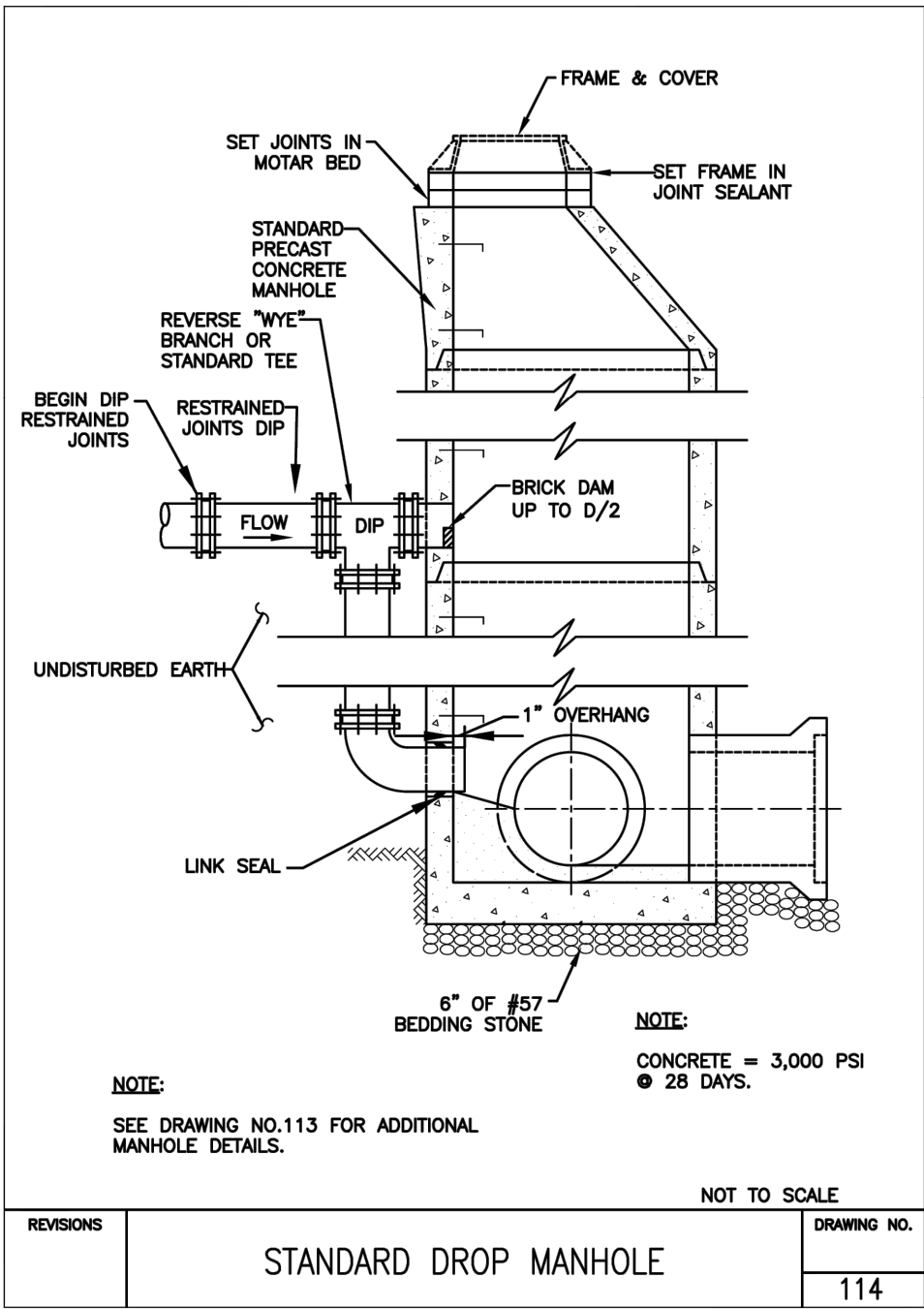
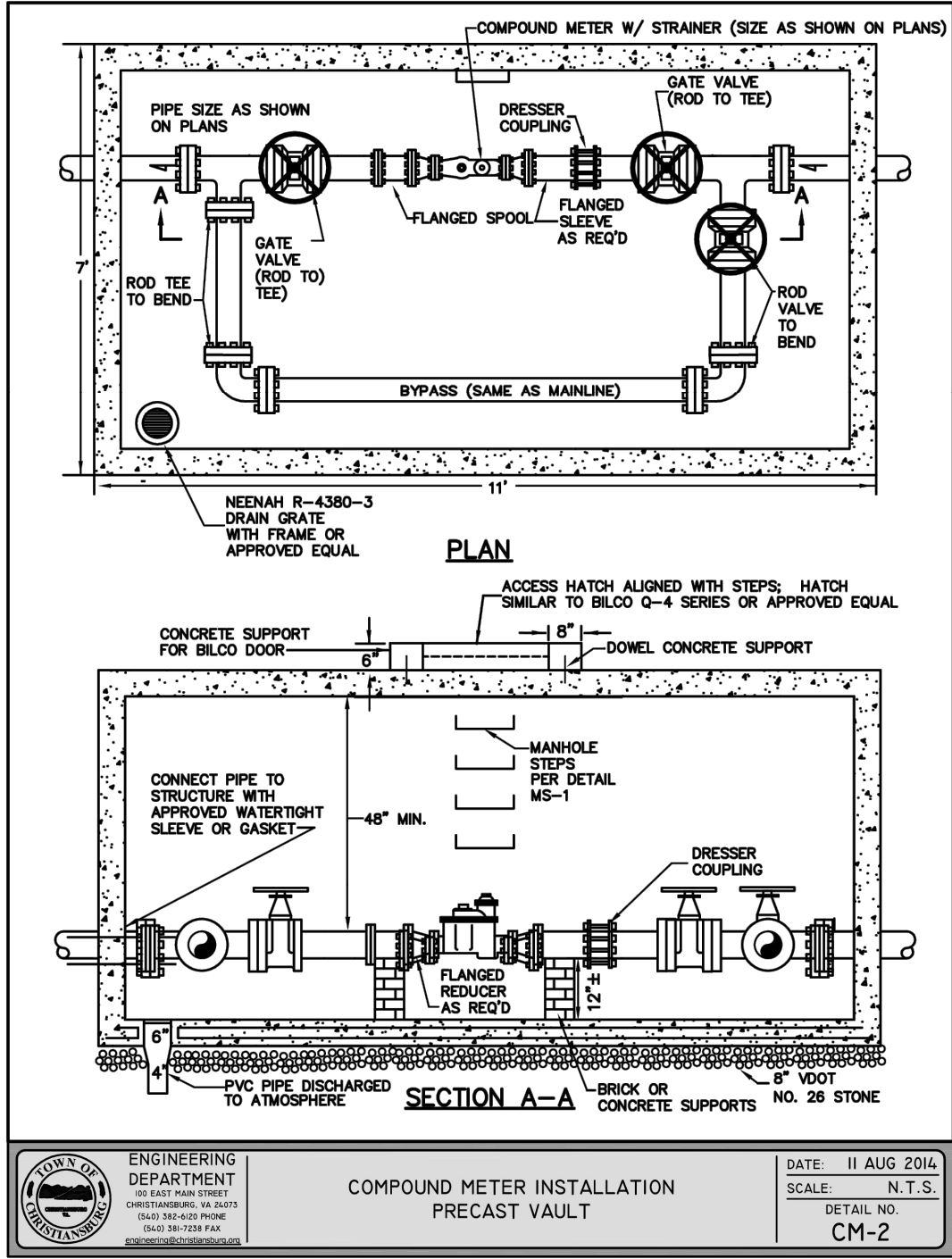
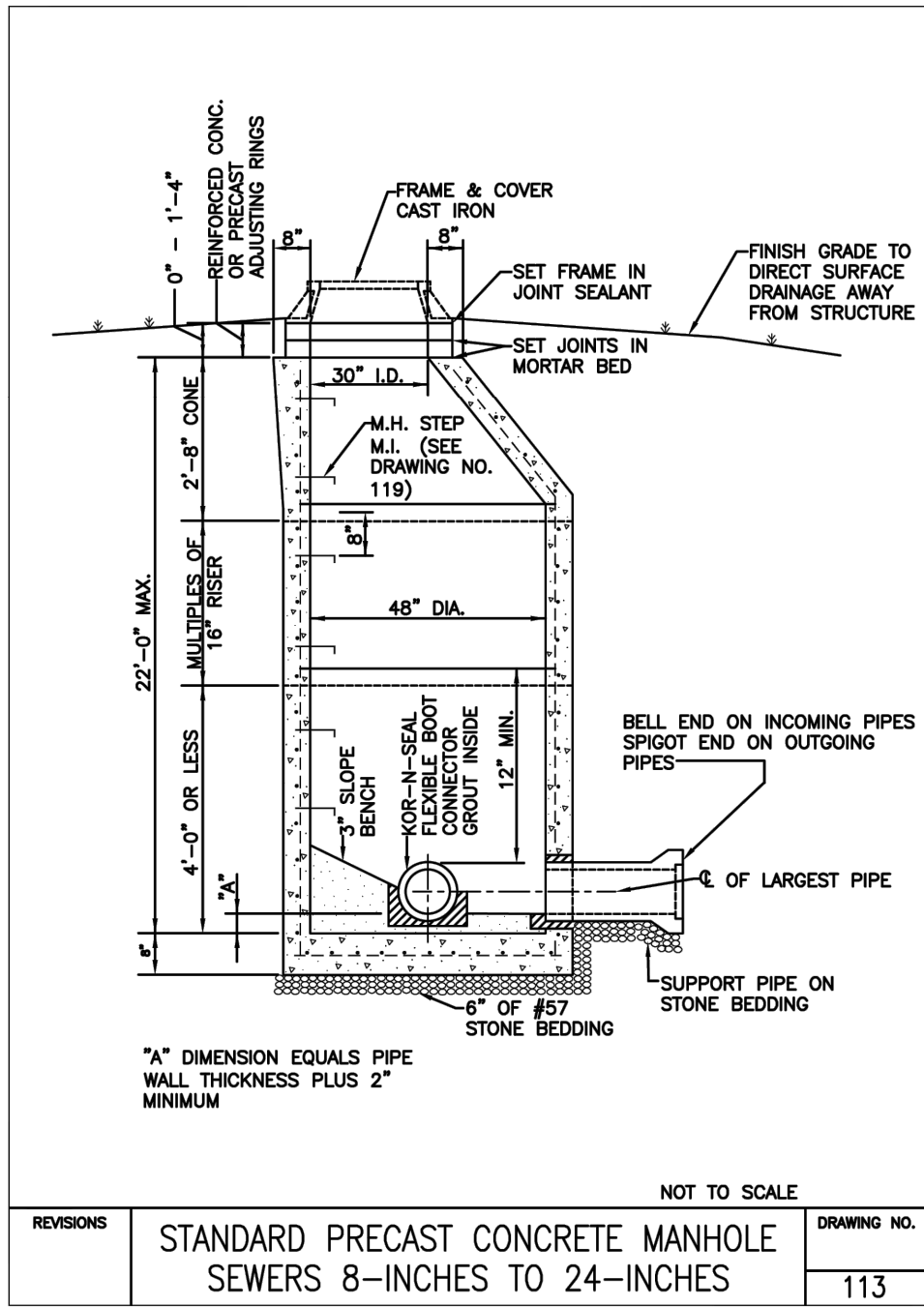
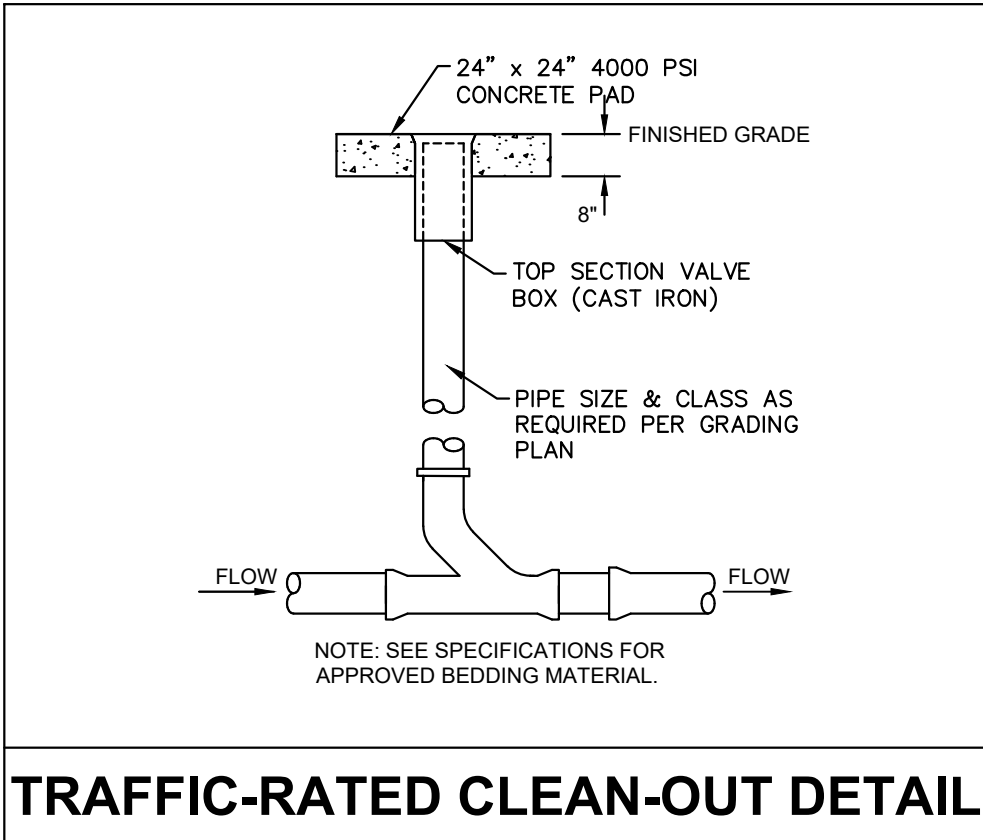
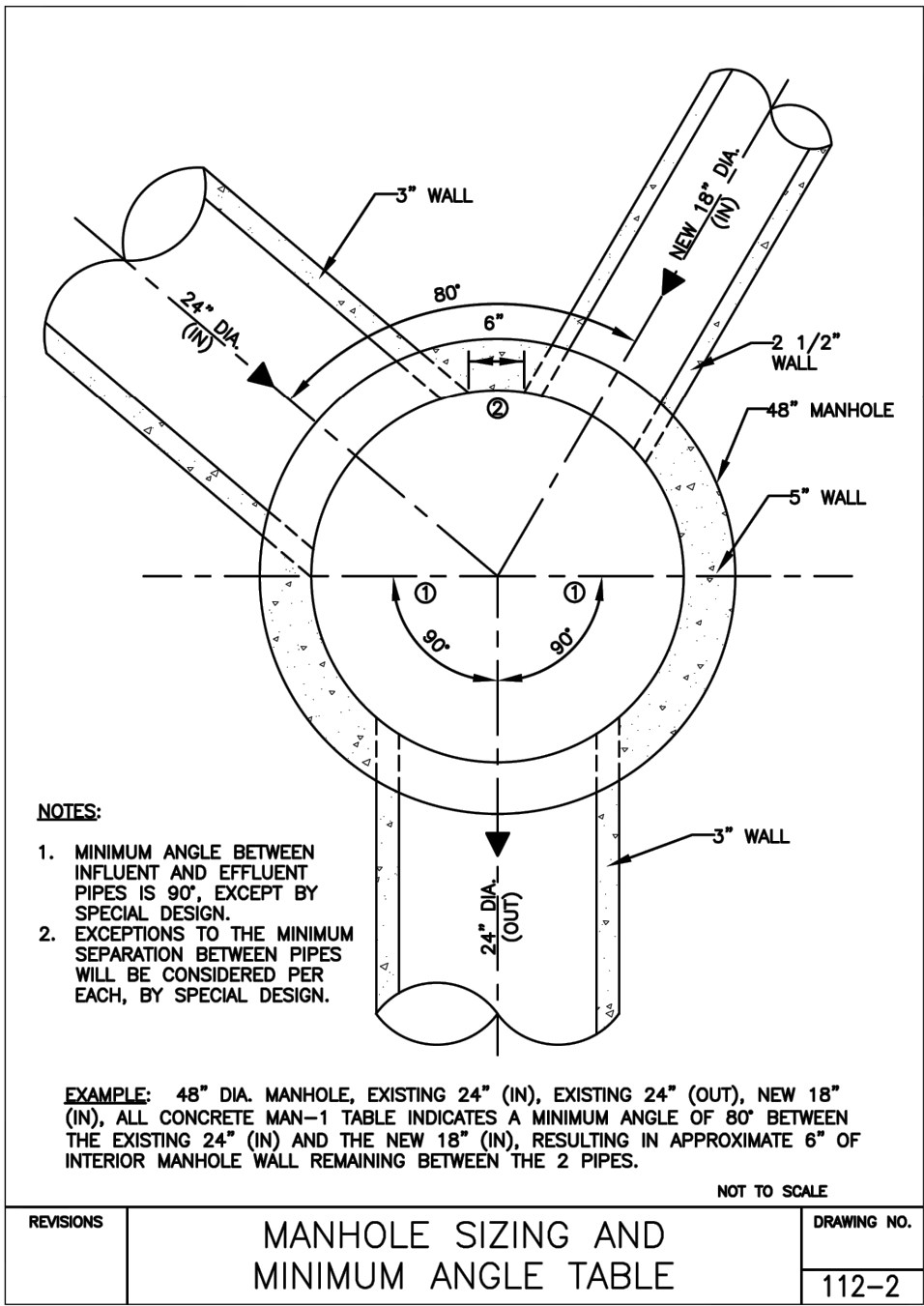
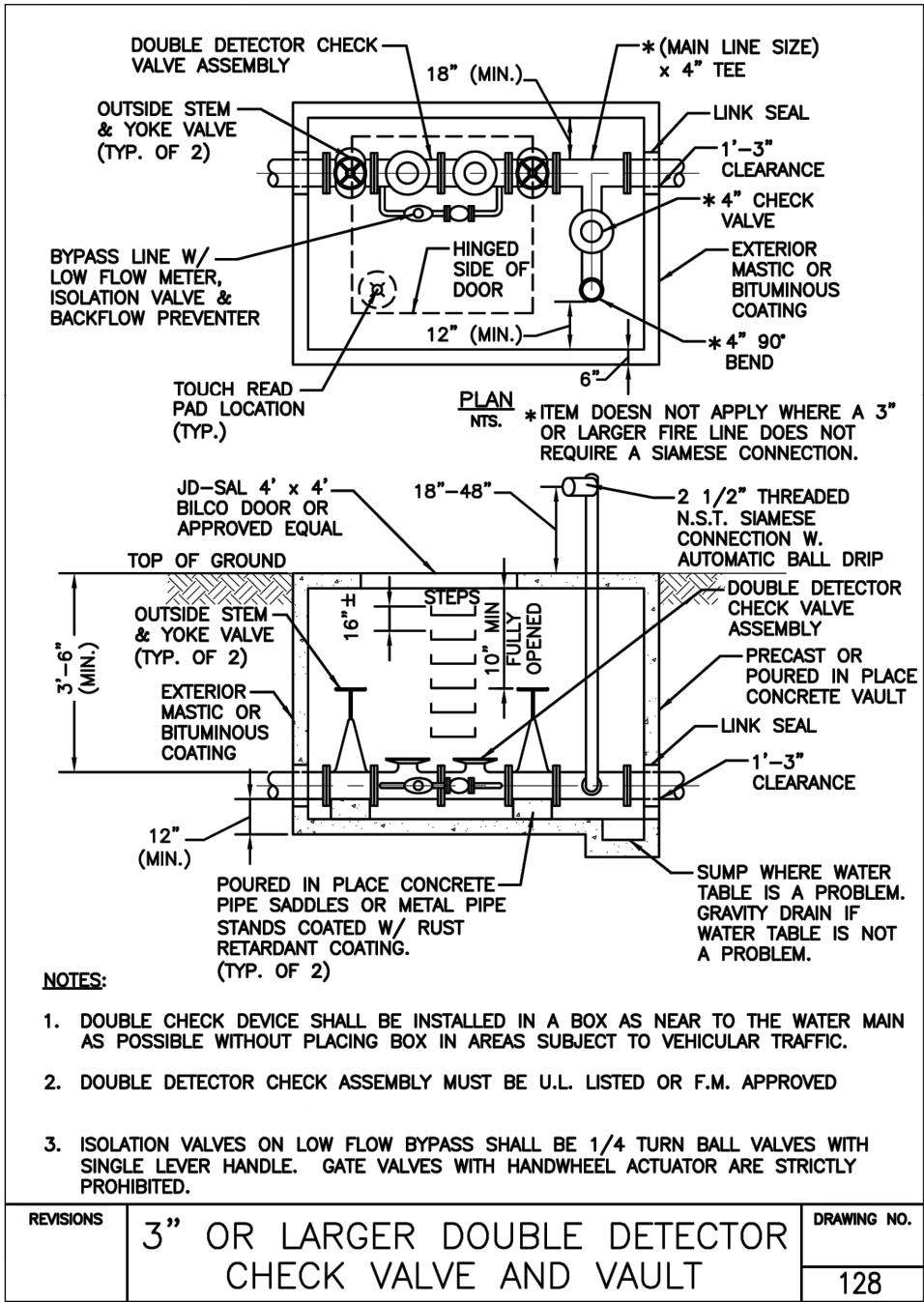
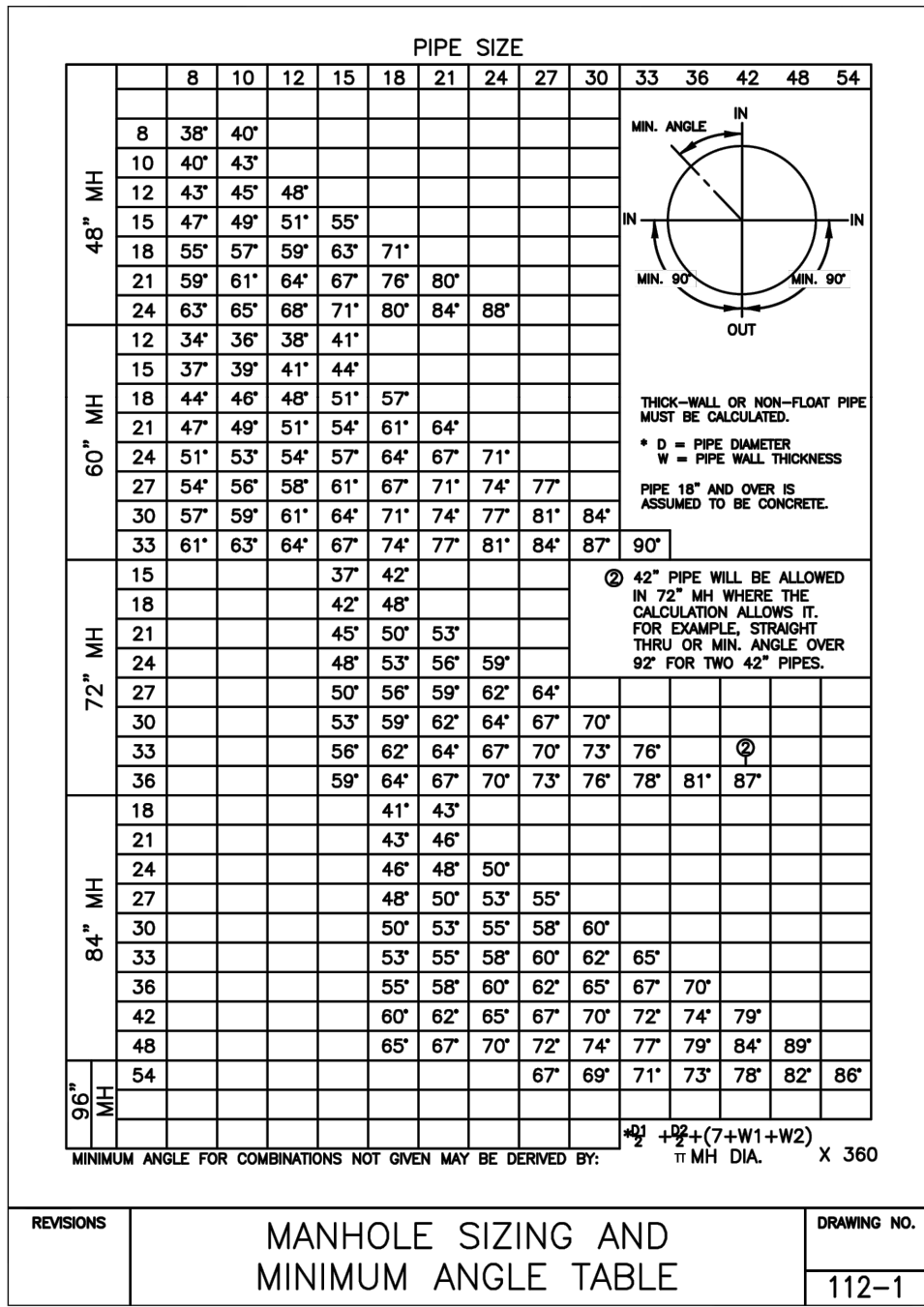
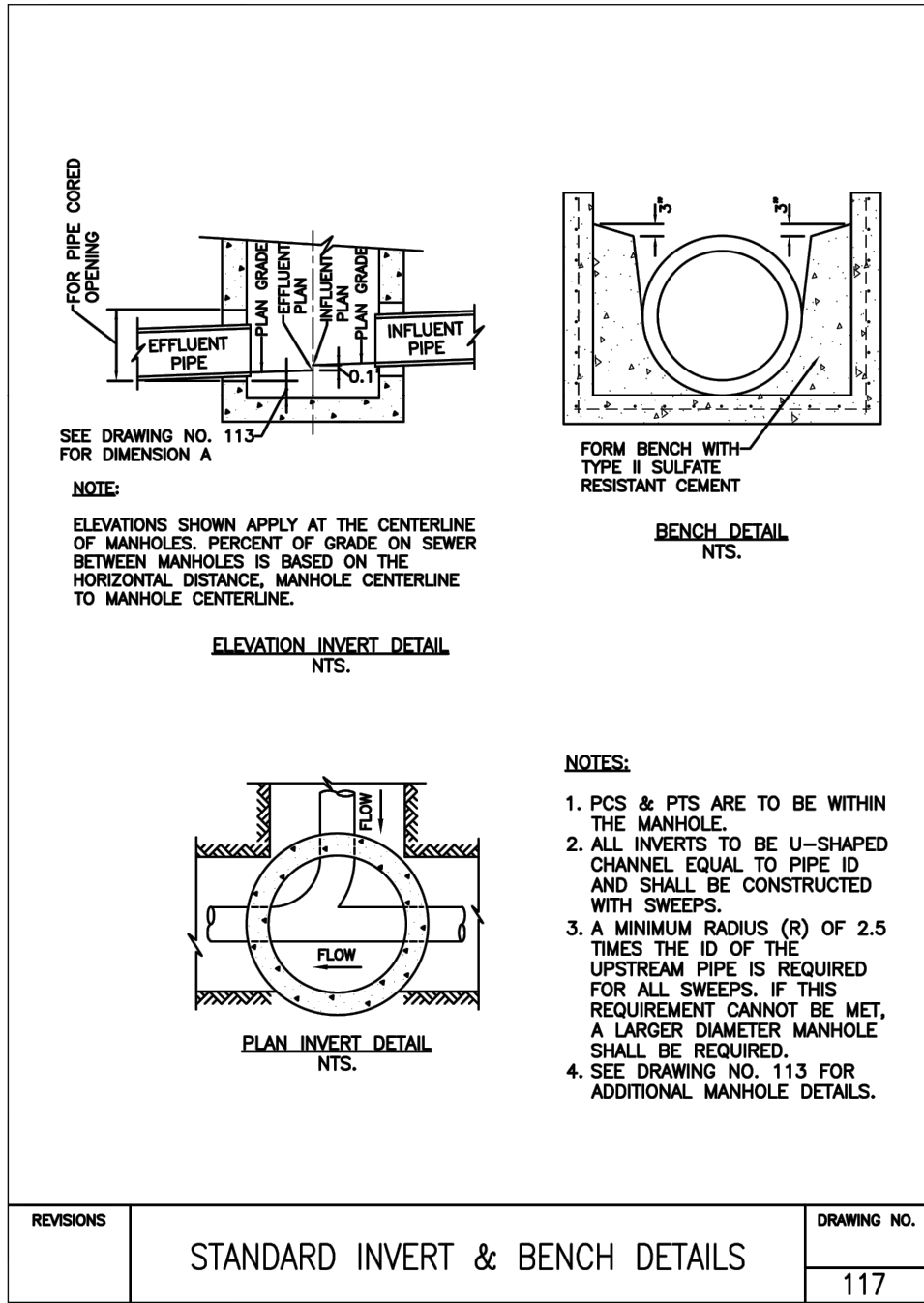
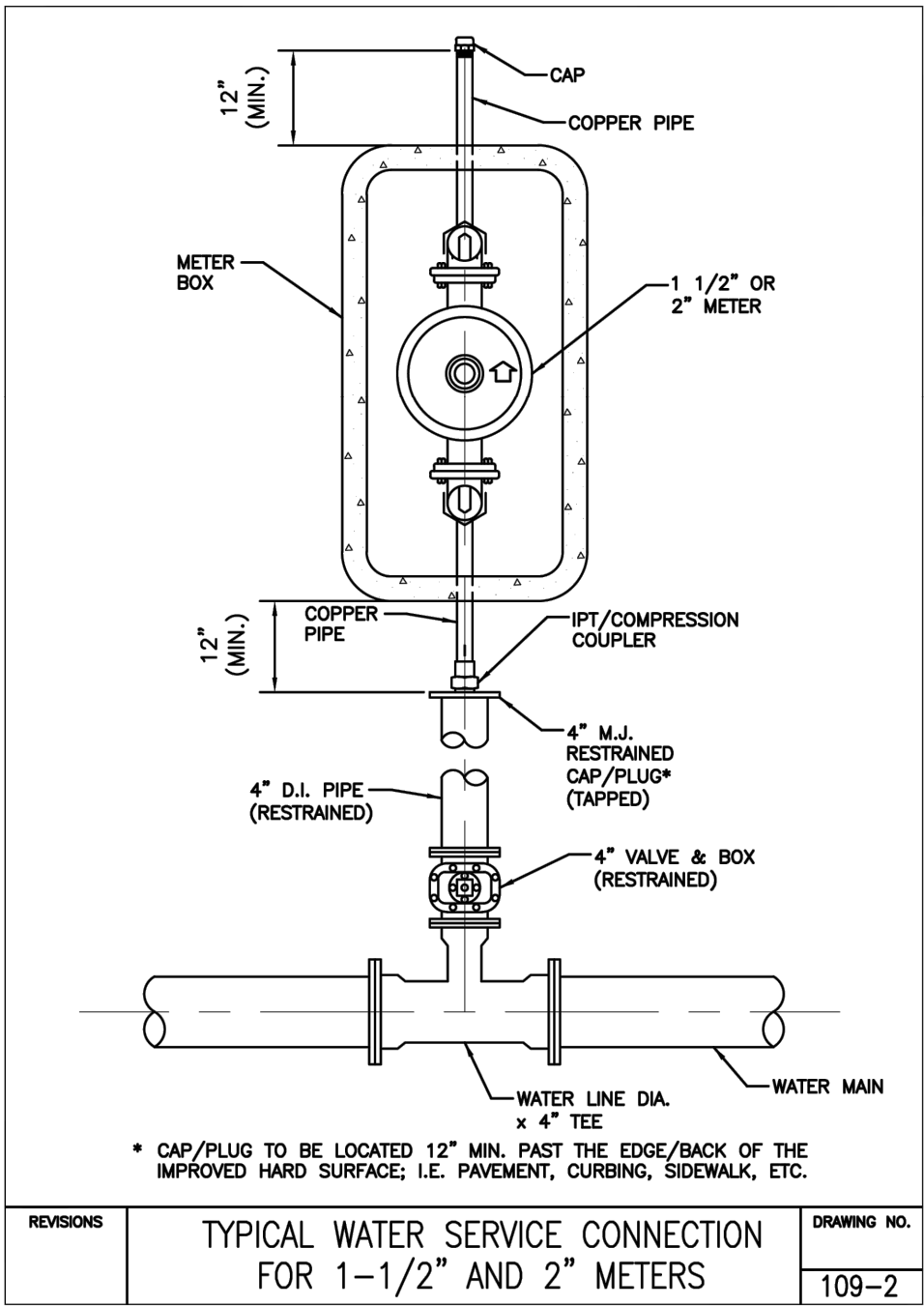
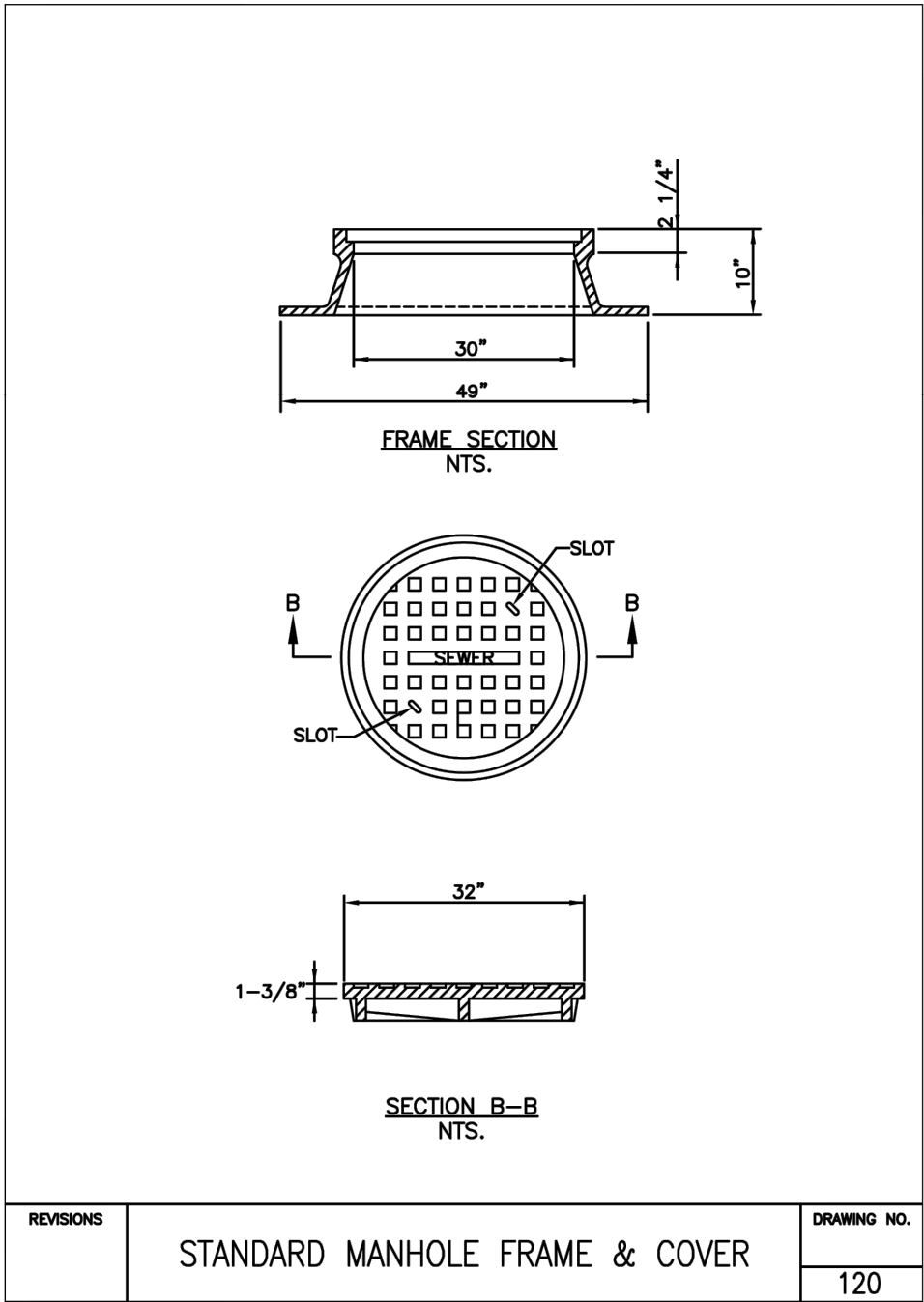
Meter Sizing Form					
Applicant Name:	Josh MacDonald	Date:	7/10/2025		
Address:	6806 Paragon Place, Suite 310, Richmond, VA 23230	Tax Map #	63 A 80		
Building Address:	N/A	Phone #	804-462-9704		
Project Hercules					
Development Name:	Flatten Value @ 35 gpm	No. of Ex. Fixtures	No. of Prop. Fixtures	Flatten Value	
Domestic Demand					
Fixtures					
Bathroom	10	4		40	
Kitchen Sink	10	1		10	
Laundry	10	1		10	
Laundry Tray	10	1		10	
Head (Shower Only)	10	1		10	
Service Sink	10	1		10	
Unaid	10	1		10	
Wash Sink (each set of Fixtures)	10	1		10	
Water Closet	10	1		10	
Disinfectant	10	1		10	
Washing Machine	10	1		10	
Hose Connection (Wash Down)	10	1		10	
Hose (go Pt. Wash Down)	10	1		10	
Other					
Combined Fixtures Value Total					
Domestic plus Fire Demand					
Equivalent Fixed Flow for Domestic Fixtures					
Fixed Flow					
Total Flow					
I certify that the information on this form is true and correct.					
Applicant's Signature					
January 2024					



TYPICAL WATER SERVICE CONNECTION FOR 3/4" AND 1" METERS

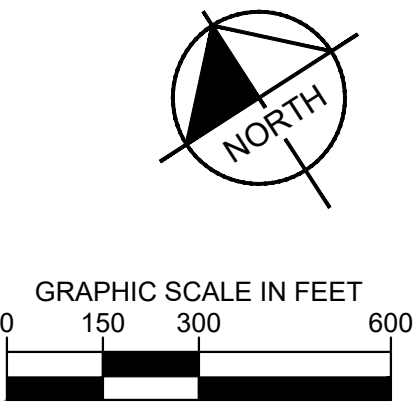


Plotted By:McGray, Stephen Sheet Set:Kha Layout:CU-503 UTILITY DETAILS November 08, 2025 04:54:03pm
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PROJECT HERCULES

APPOMATTOX COUNTY

VA

OVERALL PLANTING PLAN

KHA PROJECT	113706001
DATE	11/14/2025
SCALE	AS SHOWN
DESIGNED BY	STM
DRAWN BY	STM
CHECKED BY	JMM

COMMONWEALTH OF VIRGINIA

KATELYN NICHOLE MCKENNA

LANDSCAPE ARCHITECT

Kimley»Horn

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Jacobs

Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CP-101 PLANTING PLAN November 05, 2025 04:54:32pm
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INSET A



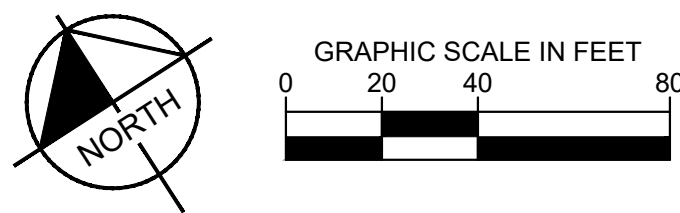
INSET B

PLANT KEY

BUFFER PLANTING
20' WIDTH EXTENDING THE LENGTH OF THE DEVELOPMENT AREA, EVERGREEN TREES (4' HT MIN AT PLANTING) IN ROWS OF 15' APART AND STAGGERED 10' O.C.; REFER TO DETAIL 2, CP-502.
Ilex opaca / American Holly
Ilex x 'Nellie R. Stevens' / Nellie R. Stevens Holly
Magnolia grandiflora 'Little Gem' / Little Gem Dwarf Southern Magnolia
Pinus taeda / Loblolly Pine
Pinus virginiana / Virginia Pine

NOTE: AREAS OF TEMPORARY WORKSPACE WHERE NO SWM MEASURES ARE PROPOSED MUST BE RESTORED IN-KIND PER RESTORATION SEQUENCE ON SHEET CE-501. TREE AND BUFFER PRESERVATION AREAS ARE APPROXIMATE. BUFFER PLANTINGS SHOWN ARE CONCEPTUAL, AND SUBJECT TO CHANGE BASED ON FIELD REVIEW BY THE APPOMATTOX COUNTY ZONING ADMINISTRATOR. BUFFER PLANTINGS SHALL ENSURE A MINIMUM OF 20' OF VEGETATION AROUND THE PERIMETER OF THE PROPERTY. REVISED BUFFER ZONES WILL ADDRESS AREAS LACKING SUFFICIENT TREE COVERAGE AND WILL BE FIELD-ADJUSTED AS NECESSARY. FINAL APPROVAL OF SCREENING WILL BE PROVIDED BY THE ZONING ADMINSTRATOR AT THE CONCLUSION OF CONSTRUCTION.

- GENERAL NOTES:**
- EXISTING TREES AND SHRUBS INDICATED TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY INSTALLING TREE PROTECTIVE FENCING PER THE PROJECT PLANS AND SPECIFICATIONS.
 - SEE SHEET CP-501 FOR PLANTING NOTES AND DETAILS.
 - THE OWNER IS RESPONSIBLE FOR REPLACEMENT OF ANY PLANTING (I.E. SHRUBS, ETC.) DAMAGED OR REMOVED BY DPU, OR ITS AGENT, AS REQUIRED FOR MAINTENANCE OF COUNTY OWNED WATER AND/OR SEWER FACILITIES.
 - NO DISTURBANCE OR WORK IS PERMITTED OUTSIDE OF LIMITS OF DISTURBANCE OTHER THAN DIGGING HOLES FOR TREE ROOT BALLS.



KHA PROJECT	113706001
DATE	11/14/2025
SCALE	AS SHOWN
DESIGNED BY	STM
DRAWN BY	STM
CHECKED BY	JMM

PLANTING PLAN

PROJECT HERCULES

SHEET NUMBER
CP-101

APPOMATTOX COUNTY
VA

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Plotted By:McGray, Stephen Sheet Set:Kha Layout:CP-102 PLANTING PLAN November 05, 2025 04:54:42pm
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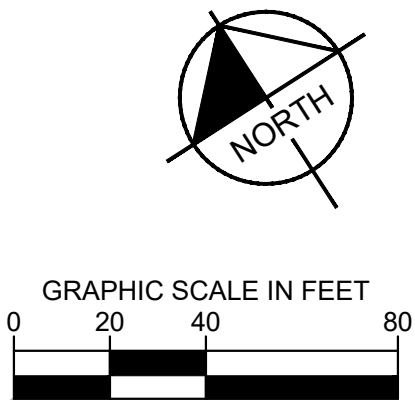
INSET C

PLANT KEY

BUFFER PLANTING
20' WIDTH EXTENDING THE LENGTH OF THE DEVELOPMENT AREA, EVERGREEN TREES (4' HT MIN AT PLANTING) IN ROWS OF 15' APART AND STAGGERED 10' O.C.; REFER TO DETAIL 2, CP-502.
Ilex opaca / American Holly
Ilex x 'Nellie R. Stevens' / Nellie R. Stevens Holly
Magnolia grandiflora 'Little Gem' / Little Gem Dwarf Southern Magnolia
Pinus taeda / Loblolly Pine
Pinus virginiana / Virginia Pine

NOTE: AREAS OF TEMPORARY WORKSPACE WHERE NO SWM MEASURES ARE PROPOSED MUST BE RESTORED IN-KIND PER RESTORATION SEQUENCE ON SHEET CE-501. TREE AND BUFFER PRESERVATION AREAS ARE APPROXIMATE. BUFFER PLANTINGS SHOWN ARE CONCEPTUAL, AND SUBJECT TO CHANGE BASED ON FIELD REVIEW BY THE APPOMATTOX COUNTY ZONING ADMINISTRATOR. BUFFER PLANTINGS SHALL ENSURE A MINIMUM OF 20' OF VEGETATION AROUND THE PERIMETER OF THE PROPERTY. REVISED BUFFER ZONES WILL ADDRESS AREAS LACKING SUFFICIENT TREE COVERAGE AND WILL BE FIELD-ADJUSTED AS NECESSARY. FINAL APPROVAL OF SCREENING WILL BE PROVIDED BY THE ZONING ADMINSTRATOR AT THE CONCLUSION OF CONSTRUCTION.

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 - NO DISTURBANCE OR WORK IS PERMITTED OUTSIDE OF LIMITS OF DISTURBANCE OTHER THAN DIGGING HOLES FOR TREE ROOT BALLS.



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KHA PROJECT	113706001	DATE	11/14/2025	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
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PROJECT HERCULES

PLANTING PLAN

APPOMATTOX COUNTY

VA

SHEET NUMBER

CP-102

Jacobs

Plotted By:McGray, Stephen Sheet Set:Kha Layout:CP-103 PLANTING PLAN November 05, 2025 04:54:46pm
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INSET D

PLANT KEY

BUFFER PLANTING
20' WIDTH EXTENDING THE LENGTH OF THE DEVELOPMENT AREA, EVERGREEN TREES (4' HT MIN AT PLANTING) IN ROWS OF 15' APART AND STAGGERED 10' O.C.; REFER TO DETAIL 2, CP-502.
Ilex opaca / American Holly
Ilex x 'Nellie R. Stevens' / Nellie R. Stevens Holly
Magnolia grandiflora 'Little Gem' / Little Gem Dwarf Southern Magnolia
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KHA PROJECT	113706001	DATE	11/14/2025	SCALE	AS SHOWN	DESIGNED BY	STM	DRAWN BY	STM	CHECKED BY	JMM
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PLANTING PLAN

PROJECT HERCULES

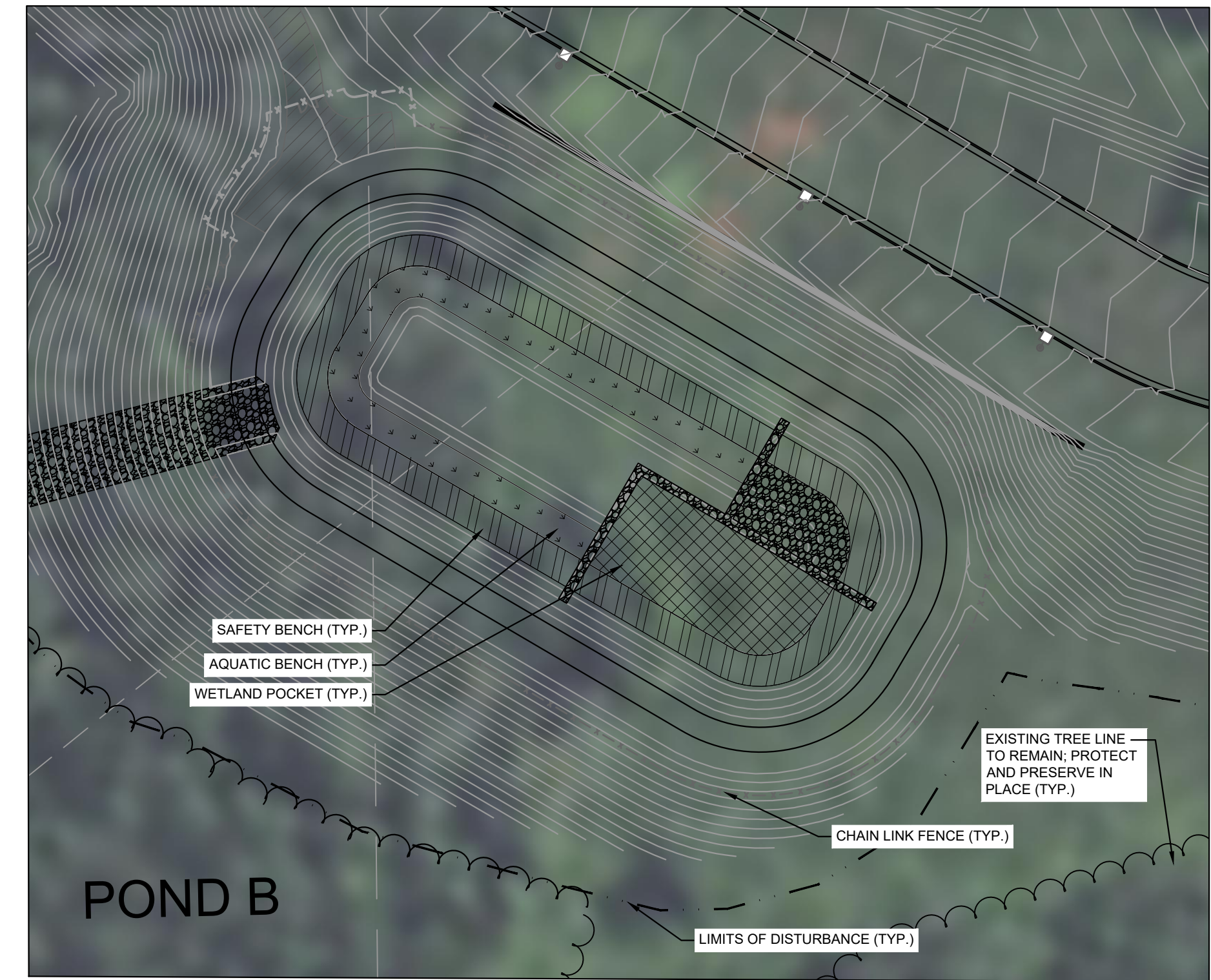
APPOMATTOX COUNTY VA

SHEET NUMBER
CP-103

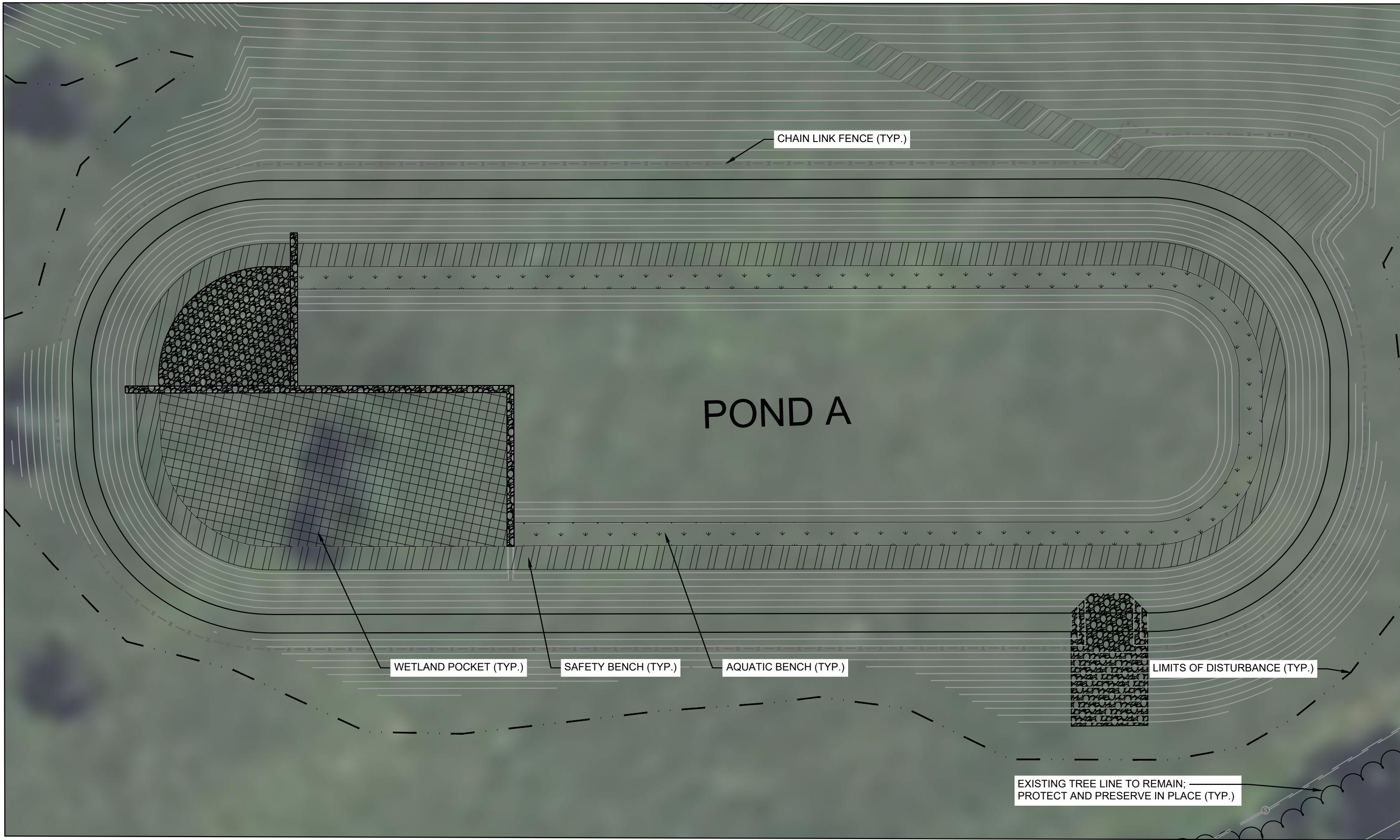
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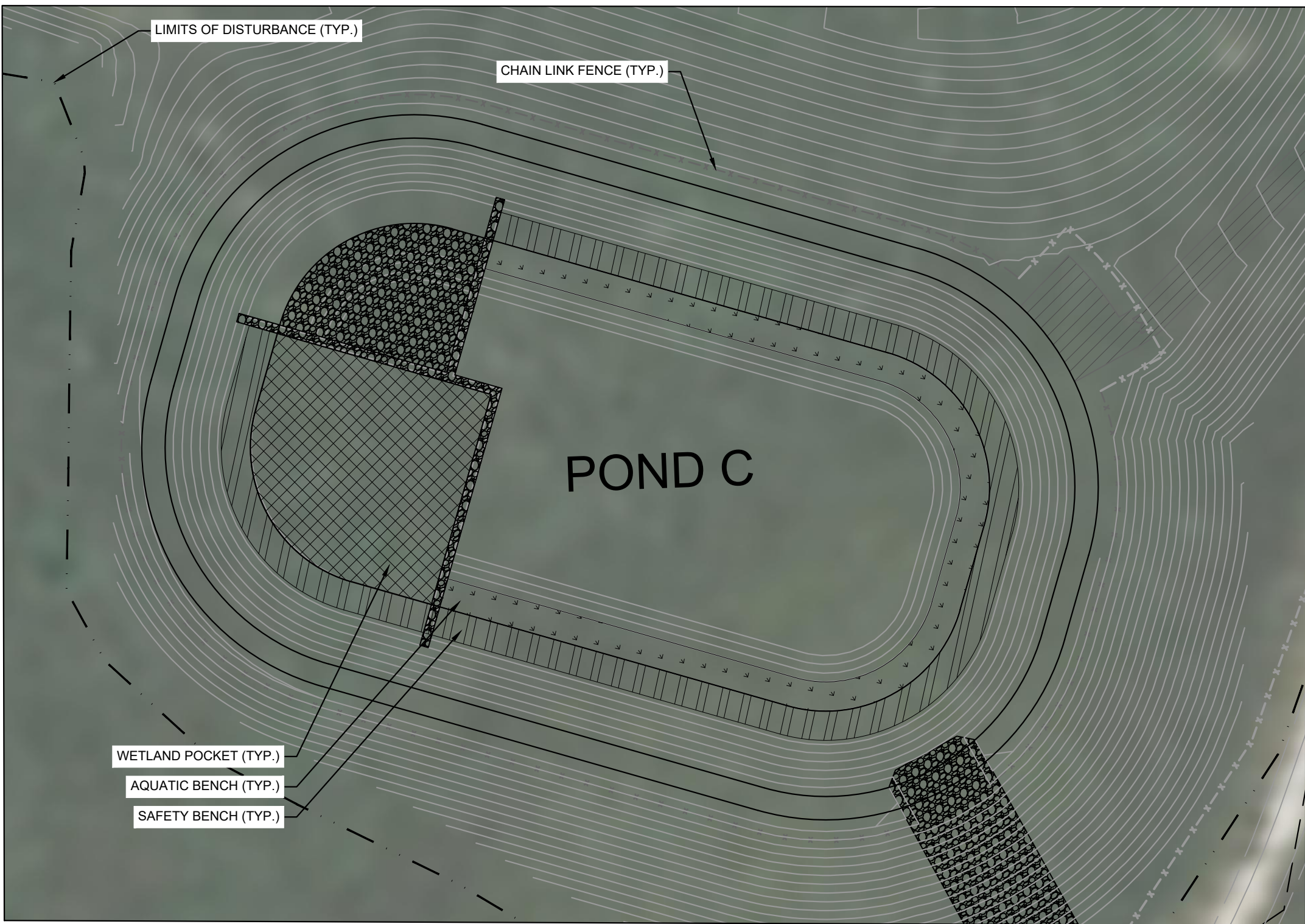
Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CP-104 PLANTING PLAN November 05, 2025 04:54:54pm
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INSET F

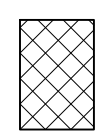
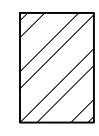
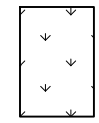


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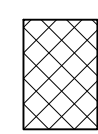
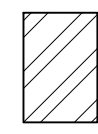
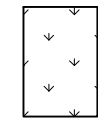


INSET G

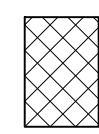
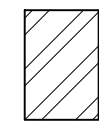
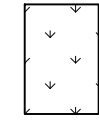
POND A PLANT SCHEDULE

	WETLAND POCKET	9,421 sf
	SAFETY BENCH	11,426 sf
	AQUATIC BENCH	7,975 sf

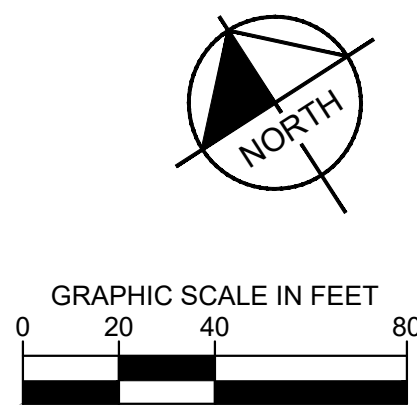
POND B PLANT SCHEDULE

	WETLAND POCKET	2,301 sf
	SAFETY BENCH	4,696 sf
	AQUATIC BENCH	2,642 sf

POND C PLANT SCHEDULE

	WETLAND POCKET	5,200 sf
	SAFETY BENCH	6,013 sf
	AQUATIC BENCH	4,287 sf

- GENERAL NOTES:
- SEE SHEET CP-501 FOR PLANTING NOTES AND DETAILS.
 - SEE SHEET CP-502 FOR PLANTING SPECIFICATIONS, QUANTITIES, AND DETAILS OF POND PLANTINGS.
 - THE OWNER IS RESPONSIBLE FOR REPLACEMENT OF ANY PLANTING (I.E. SHRUBS, ETC.) DAMAGED OR REMOVED BY DPU, OR ITS AGENT, AS REQUIRED FOR MAINTENANCE OF COUNTY OWNED WATER AND/OR SEWER FACILITIES.



PROJECT HERCULES

CP-104

APPOMATTOX COUNTY

VA

PLANTING PLAN

KHA PROJECT

113706001

DATE

11/14/2025

SCALE

AS SHOWN

DESIGNED BY

STM

DRAWN BY

STM

CHECKED BY

JMM

COMMONWEALTH OF VIRGINIA

KATELYN NICHOLE MCKENNA

Lic. No. 002288

11/14/2025

LANDSCAPE ARCHITECT

Kimley»Horn

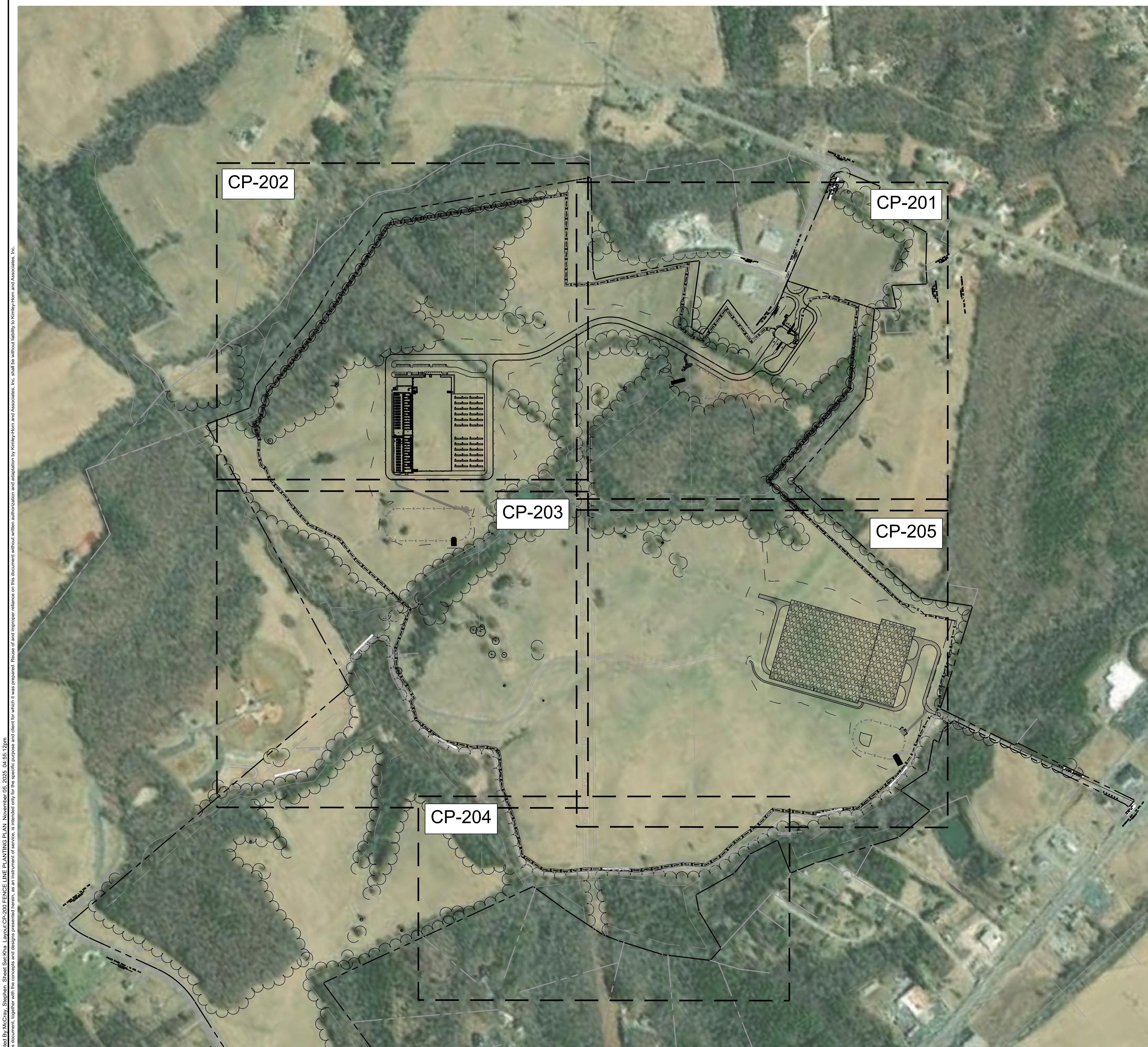
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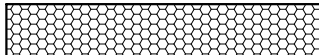
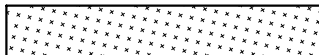
PHONE: 804-673-3882

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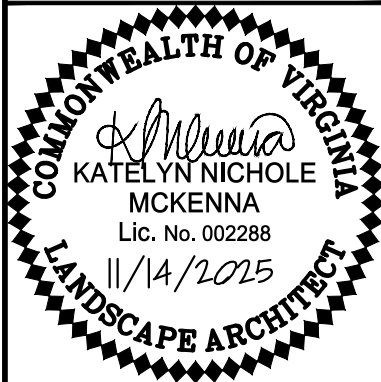
Jacobs



FENCELINE PLANTING LEGEND

-  CONVERT TO BRUSH
-  MANAGED TURF (TEMPORARY WORKSPACE)
- (SEE RESTORATION SEQUENCE ON SHEET CE-501 FOR TEMPORARY WORKSPACE)

NOTE: AREAS OF TEMPORARY WORKSPACE WHERE NO SWM MEASURES ARE PROPOSED MUST BE RESTORED IN-KIND PER RESTORATION SEQUENCE ON SHEET CE-501.



KHA PROJECT	113706001
DATE	11/14/2025
SCALE	AS SHOWN
DESIGNED BY	STM
DRAWN BY	STM
CHECKED BY	JMM

FENCE LINE
PLANTING PLAN

PROJECT HERCULES

APPOMATTOX COUNTY VA

SHEET NUMBER
CP-200

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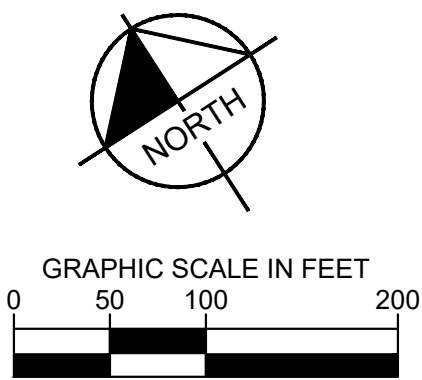
FENCELINE PLANTING LEGEND

- CONVERT TO BRUSH
 - MANAGED TURF (TEMPORARY WORKSPACE)
- (SEE RESTORATION SEQUENCE ON SHEET CE-501 FOR TEMPORARY WORKSPACE)

NOTE: AREAS OF TEMPORARY WORKSPACE WHERE NO SWM MEASURES ARE PROPOSED MUST BE RESTORED IN-KIND PER RESTORATION SEQUENCE ON SHEET CE-501.

GENERAL NOTES:

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PROJECT HERCULES

APPOMATTOX COUNTY

SHEET NUMBER
CP-201

FENCE LINE
PLANTING PLAN

KHA PROJECT
113706001

DATE
11/14/2025

SCALE AS SHOWN

DESIGNED BY
STM

DRAWN BY
STM

CHECKED BY
JMM

COMMONWEALTH OF VIRGINIA

KATELYN NICHOLE
MCKENNA

Lic. No. 002288

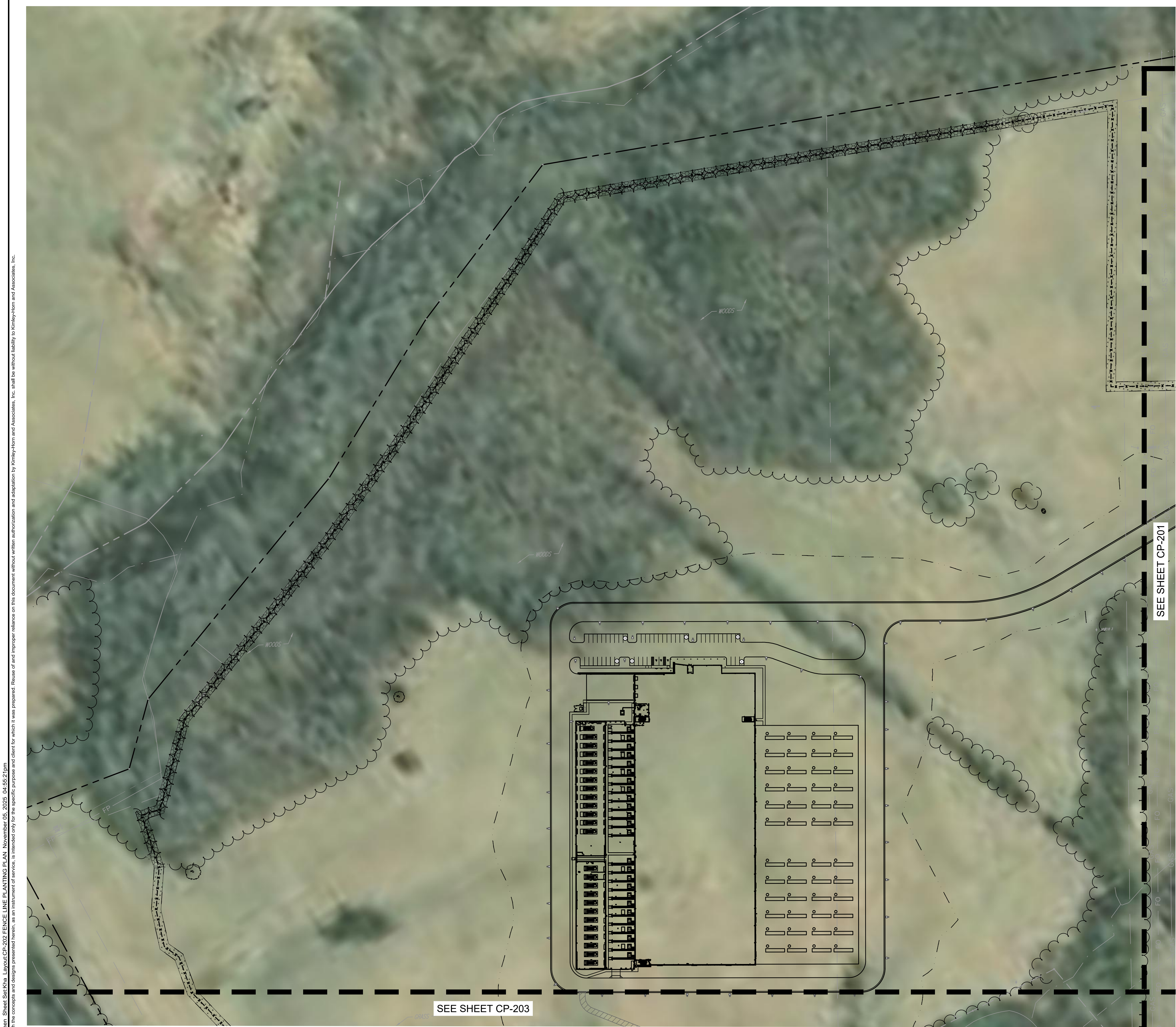
11/14/2025

LANDSCAPE ARCHITECT

Kimley»Horn

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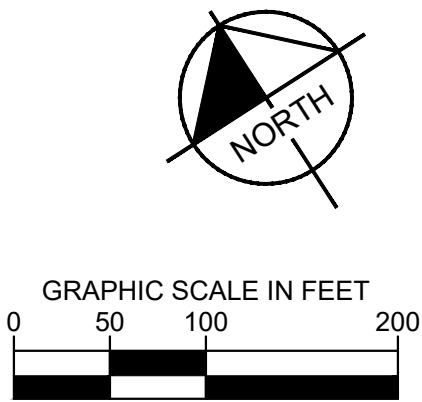
FENCELINE PLANTING LEGEND

- CONVERT TO BRUSH
- MANAGED TURF (TEMPORARY WORKSPACE)
- (SEE RESTORATION SEQUENCE ON SHEET CE-501 FOR TEMPORARY WORKSPACE)

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- EXISTING TREES AND SHRUBS INDICATED TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY INSTALLING TREE PROTECTIVE FENCING PER THE PROJECT PLANS AND SPECIFICATIONS.
- SEE SHEET CP-501 FOR PLANTING NOTES AND DETAILS.
- THE OWNER IS RESPONSIBLE FOR REPLACEMENT OF ANY PLANTING (I.E. SHRUBS, ETC.) DAMAGED OR REMOVED BY DPU, OR ITS AGENT, AS REQUIRED FOR MAINTENANCE OF COUNTY OWNED WATER AND/OR SEWER FACILITIES.
- NO DISTURBANCE OR WORK IS PERMITTED OUTSIDE OF LIMITS OF DISTURBANCE OTHER THAN DIGGING HOLES FOR TREE ROOT BALLS.



PROJECT HERCULES

SHEET NUMBER
CP-202

APPOMATTOX COUNTY

VA

FENCE LINE
PLANTING PLAN

KHA PROJECT
113706001

DATE
11/14/2025

SCALE AS SHOWN

DESIGNED BY
STM

DRAWN BY
STM

CHECKED BY
JMM

COMMONWEALTH OF VIRGINIA

KATELYN NICHOLE
MCKENNA

Lic. No. 002288

11/14/2025

LANDSCAPE ARCHITECT

Kimley»Horn

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6806 PARAGON PLACE, SUITE 310, RICHMOND, VA 23230
PHONE: 804-673-3882
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Jacobs

Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CP-203 FENCE LINE PLANTING PLAN November 05, 2025 04:55:24pm
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FENCELINE PLANTING LEGEND

- CONVERT TO BRUSH
- MANAGED TURF (TEMPORARY WORKSPACE)
- (SEE RESTORATION SEQUENCE ON SHEET CE-501 FOR TEMPORARY WORKSPACE)

NOTE: AREAS OF TEMPORARY WORKSPACE WHERE NO SWM MEASURES ARE PROPOSED MUST BE RESTORED IN-KIND PER RESTORATION SEQUENCE ON SHEET CE-501.

- GENERAL NOTES:
- EXISTING TREES AND SHRUBS INDICATED TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY INSTALLING TREE PROTECTIVE FENCING PER THE PROJECT PLANS AND SPECIFICATIONS.
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KHA PROJECT	113706001
DATE	11/14/2025
SCALE	AS SHOWN
DESIGNED BY	STM
DRAWN BY	STM
CHECKED BY	JMM

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COMMONWEALTH OF VIRGINIA

KATELYN NICHOLE MCKENNA
Lic. No. 002288
11/14/2025
LANDSCAPE ARCHITECT

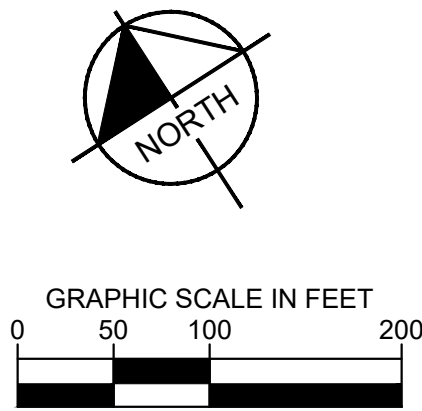
FENCE LINE PLANTING PLAN

PROJECT HERCULES

APPOMATTOX COUNTY VA

SHEET NUMBER CP-203

Plotted By: McCray, Stephen Sheet Set: KHA Layout: CP-204 FENCE LINE PLANTING PLAN November 05, 2025 04:55:31pm
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FENCELINE PLANTING LEGEND

- CONVERT TO BRUSH
- MANAGED TURF (TEMPORARY WORKSPACE)
- (SEE RESTORATION SEQUENCE ON SHEET CE-501 FOR TEMPORARY WORKSPACE)

NOTE: AREAS OF TEMPORARY WORKSPACE WHERE NO SWM MEASURES ARE PROPOSED MUST BE RESTORED IN-KIND PER RESTORATION SEQUENCE ON SHEET CE-501.

GENERAL NOTES:

- EXISTING TREES AND SHRUBS INDICATED TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY INSTALLING TREE PROTECTIVE FENCING PER THE PROJECT PLANS AND SPECIFICATIONS.
- SEE SHEET CP-501 FOR PLANTING NOTES AND DETAILS.
- THE OWNER IS RESPONSIBLE FOR REPLACEMENT OF ANY PLANTING (I.E. SHRUBS, ETC.) DAMAGED OR REMOVED BY DPU, OR ITS AGENT, AS REQUIRED FOR MAINTENANCE OF COUNTY OWNED WATER AND/OR SEWER FACILITIES.
- NO DISTURBANCE OR WORK IS PERMITTED OUTSIDE OF LIMITS OF DISTURBANCE OTHER THAN DIGGING HOLES FOR TREE ROOT BALLS.

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COMMONWEALTH OF VIRGINIA

KATELYN NICHOLE MCKENNA

Lic. No. 002288

11/14/2025

LANDSCAPE ARCHITECT

KHA PROJECT	113706001
DATE	11/14/2025
SCALE	AS SHOWN
DESIGNED BY	STM
DRAWN BY	STM
CHECKED BY	JMM

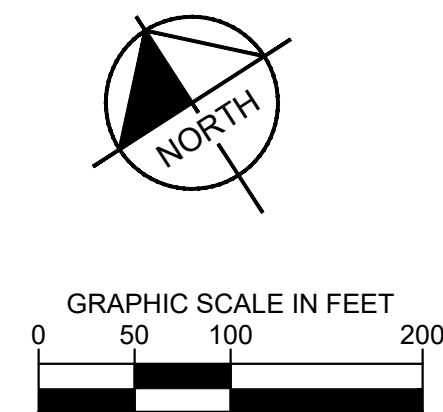
FENCE LINE
PLANTING PLAN

PROJECT HERCULES

APPOMATTOX COUNTY

VA

SHEET NUMBER
CP-204



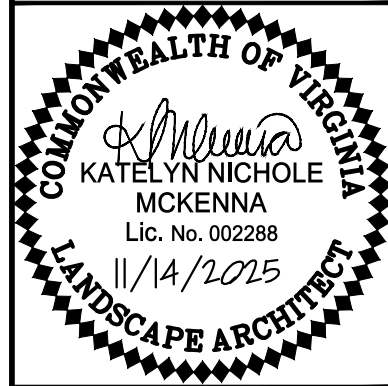
 CONVERT TO BRUSH

 MANAGED TURF (TEMPORARY WORKSPACE)

(SEE RESTORATION SEQUENCE ON SHEET CE-501 FOR TEMPORARY WORKSPACE)

GENERAL NOTES:

1. EXISTING TREES AND SHRUBS INDICATED TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY INSTALLING TREE PROTECTIVE FENCING PER THE PROJECT PLANS AND SPECIFICATIONS.
2. SEE SHEET CP-501 FOR PLANTING NOTES AND DETAILS.
3. THE OWNER IS RESPONSIBLE FOR REPLACEMENT OF ANY PLANTING (I.E. SHRUBS, ETC.) DAMAGED OR REMOVED BY DPU, OR ITS AGENT, AS REQUIRED FOR MAINTENANCE OF COUNTY OWNED WATER AND/OR SEWER FACILITIES.
4. NO DISTURBANCE OR WORK IS PERMITTED OUTSIDE OF LIMITS OF DISTURBANCE OTHER THAN DIGGING HOLES FOR TREE ROOT BALLS.



KHA PROJECT 113706001
DATE 11/14/2025
SCALE AS SHOWN
DESIGNED BY STM
DRAWN BY STM
CHECKED BY JMM

FENCE LINE PLANTING PLAN

PROJECT HERCULES

APPOMATTOX COUNTY

SHEET NUMBER
CP-205

Jacobs

Kimley»»Horn

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1. Plants shall be healthy, vigorous material, free of pests and diseases and are subject to approval/rejection of the Landscape Architect prior to, during and after installation.
2. Contractor shall identify all materials at growing location prior to purchase and submit digital photographs, and source list to the Landscape Architect for approval at a minimum of six (6) calendar weeks prior to installation. Plants not approved shall be resourced and resubmitted.
3. Planting beds and individual tree plantings shall be mulched continuously as specified.
4. Contractor shall be responsible for and responsible for local underground utilities and excavations prior to construction that avoids damage to utilities during the course of work. Contractor shall be responsible or remedy of any damage to utilities, structures, site appearances that occur as a result of landscape related work.
5. Contractor is responsible for verifying quantities shown on documents. Field adjustments shall be approved by Landscape Architect prior to installation. Quantities indicated on drawings are for reference-it is the Contractor's responsibility to ensure full coverage of plants at the indicated spacing.
6. Contractor is responsible for maintenance of all plantings including, but not limited to watering, mowing, edging, spraying, mulching, fertilizing, of plantings and turf areas for one (1) calendar year from date of certificate of occupancy. Contractor is responsible for warranty of all plant material for a period of one (1) calendar year from date of certificate of occupancy. Warranty replacement planting shall meet or exceed the original specifications identified on drawings. Replacement planting shall extend the same warranty as originally installed materials. Plantings and grass areas shall be flourishing and fully thriving at end of warranty period.
7. Plants identified for replacement by Owner, Landscape Architect shall be replaced immediately by the Contractor unless otherwise agreed upon. Plantings (trees, shrubs, groundcover) subject to replacement by warranty shall exhibit characteristics of 30% dead-per individual plant, non-contributing or disease compromised. Grass areas suitable for acceptance shall demonstrate 85% sustained/consistent and continuous, densely established coverage.
8. Contractor shall perform a site review at end of warranty period and provide the Owner with written documentation of the site, including plant health, warranty replacement items, and conditions that may be influencing plant health. Contractor shall remove from plants and site, all staking and guying material at end of warranty period.
9. Contractor shall comply with all local, state and federal requirements, codes and regulations related to the work undertaken.
10. All material including planting operation appearances shall be of domestic origin manufacture and sourced within 100 miles of the project site.
11. Contractor is responsible for coordination among trades operating on site. Coordination and if necessary resulting modifications to schedules are responsibility of the Contractor.

I. PLANTS

A. General

1. Live healthy plants free of dead branches and parts
2. Free of disease, insect, injury and damage
3. Unbroken, intact, dense and solid rootballs and containers, without cracks, flat sides or previously repaired damage.
4. Free of girdling roots or rootboud/circling container conditions
5. Plants of consistent in growth habit and healthy character
6. Free of compromising growth conditions such as weak root connections, crossed branches, snags and scars

Point of origin growing location within 100 miles of project site

4. Graded, standards, caliper, sizes and stock consistent with ANSI Z60.1, American Standard for Nursery Stock most current edition
9. Species identified consistent with Hortus Third: Concise Dictionary of Plants Cultivated in the United States and Canada, most current edition and Manual of Woody Plants: Their Identification, Ornament Characteristics, Culture, Propagation and Uses, most current edition
10. All disturbed areas shall be grass seed unless otherwise identified on landscape plans

1. Deciduous Single Trunk
 - a. Full, straight and upright with consistent symmetrical natural branching pattern throughout
 - b. Branching Height-seven (7) feet to lowest branch in two years unless otherwise required by local jurisdiction
2. Deciduous Multi-Trunk
 - a. Full and upright with straight consistent symmetrical natural branching pattern throughout
 - b. Canes evenly spaced and of similar growth habit
 - c. Free of suckers and extraneous branching
3. Evergreen Single-Trunk
 - a. Full and upright with continuous symmetrical dense natural habit
 - b. Clear branching height twelve (12) inches above top of rootball
 - c. Free of suckers and extraneous branching
 - d. Do not shear or otherwise prune to shape plantings

1. Full, dense and naturally symmetrical.
2. Consistent with container and/or balled and burlapped size
3. Free of suckers and extraneous branching
4. Do not shear or otherwise prune or shape plantings

1. Full and dense in pots or flats

1. Full and dense in pots or flats

1. **Subgrade**
 - a. Soil Mix-10% Compost, 90% topsoil by volume
 - b. Preparation-loosen subgrade to a minimum depth of four (4) inches. Remove all non-natural materials including litter, stones, sticks and all items greater than ¾ inch in any dimension
 - c. Preparation-spread soil mix at a depth of four (4) inches continuously to meet grade elevations shown on drawings. Allow for thickness of sod when applicable

- a. Install not longer than twenty-four (24) hours from harvest
- b. Grass bed not less than two (2) inches in continuous thickness
- c. 100% continuous live sod coverage after first growing season and at end of warranty period.
- d. Of uniform non-varying density and continuous texture quality capable of growth and development immediately upon installation. Weed and noxious plant free
- e. Stagger installation rows and place aligned parallel to contours
- f. Fill joints solidly with planting bed preparation soil
- g. Provide anchor pins at twenty-four (24) inches on center for slopes greater than 4:1

- a. Mix approved by the Landscape Architect
- b. Provide first and new of year seed crops in mix free of weed seeds and deleterious matter
- c. Provide seed mix not greater than 15% annual or perennial rye
- d. Coverage 85% continuous coverage live stand after first growing season and at end of warranty
- e. Replacement or overseeding mixes consistent with original application/installation
- f. Provide erosion blankets or other slope retention methods as noted on drawings

A. Testing

1. Materials testing information/certificates/dated labels shall be current to the project and performed/certified not greater than 120 calendar previous days from current date of submittal for review

1. Neutral Ph balance 5.5 -7.5. Friable and containing 2.0-5.0% organic matter by dry weight. Continuously free of non-soil items such as stones, debris, sticks, trash, and deleterious matter greater than ¼ inch in any direction. Clay content shall not exceed 25%.Gravel content shall not exceed 10%. Silt shall not exceed 25%

testing and additive program that demonstrates consistent performance and characteristics and composition as identified herein. Owner shall approve soil testing and soil amendment/additive methods and procedures

1. 100% organic shredded first year hardwood free of deleterious matter, rock, gravel and weed seed.
Neutral Ph balance 5.5-7.5

- F. Compost Ph**
1. Balanced 5.0-8.5 mature, stable and weed free produced by natural aerobic decomposition. Free of visible contaminants and toxic substances. Not greater than 5% sand, silt, clay or rock by dry weight. Consistent with US-EPA CFR Title 40 Part 503 Standards for Class A biosolids

1. Prior to delivery on-site, the following items are required for approval by Owner: Feedstock percentage in final compost product; statement that the products meets federal, state and local health safety requirements
2. Provide copy of lab analysis less than 120 calendar days old verifying that the product meets described physical requirements; chemical contaminants; Ph; physical contaminants; biological contaminants (including a statement that fecal coliform and salmonella testing and results comply with requirements of the US Composting Council Seal of Testing approval programs

1. 85% topsoil and 15% Compost

1. Granular 10% nitrogen, 6% Phosphorous, 4% Potassium granular form with 50% Nitrogen in organic form. Product and Material Safety Data as approved by Owner

1. Product and Material Safety Data as approved by Owner

1. Potable only unless otherwise approved by Owner

1. 2 x 2 x 48 inch square of sound hardwood, painted flat black on all sides

1. Villa Non-Abrasive Rubber Tree Ties or approved equal

1. Mirafi 140-N or approved equal

1. 1/8-inch x 4-inch in full sections. Ryerson, Timec or approved equal with integral stakes. No open corners. Corners shall be formed and trued to compliant angle or welded closed

1. Locally sourced, river rounded, unfaceted river stone/cobbles.
2. Size shall not exceed 3 total inches in any dimension.
3. Color and texture approved by Owner
4. When placed in concrete or mortar setting bed, tamp to secure and brush clear joints.
5. Concrete or mortar as approved by owner.

A. Site Conditions

1. Inspect site and notify Owner in writing of acceptance with indication that project conditions are acceptable or suitable to proceed with work. Notify Owner of any existing damage and/or other conflicting conditions.
2. Do not proceed with work until unsatisfactory conditions have been satisfactorily remedied. Notify Owner of acceptance prior to commencement of work.
3. Notify Owner in writing of any conditions that may preclude successful completion of work including items such as coordination with other trades, incomplete work, drainage, soil temperature and/or composition access to storage/work areas, damage to conditions, etc.
4. Notify Owner in writing immediately of any items that may influence work schedule, timing of tasks, materials delivery and/or installation and warranty responsibilities.
5. Coordinate and cooperate with other trades working in and adjacent to work areas. Examine drawings of other trades which show development of the entire project and become familiar with the scope of required work by others.

Recommended seasons are a general guide based on historical climatic data and typical performance of plantings, and which vary dependent on project-specific environmental conditions. Due to construction schedules, recommended planting seasons may/may not coincide with request(s) for certificate of occupancy for projects. Coordination of planting installation and seasons shall be reviewed with Owner on an individual project basis.

1. **Deciduous and Evergreen Trees**
 - a. Do not install/plant the following trees between September 15 and March 15
 1. Oaks (*Quercus* Sp., Such as *Q. rubra*, *Q. alba*, *Q. phellos*, *Q. coccinea*)
 2. Dogwood (*Cornus* Sp.)
 3. Sweetgum (*Liquidambar* Sp.)
 4. All Conifers and Evergreens except White Pine (*Pinus strobus* Sp.)
2. **Deciduous and Evergreen Shrubs**
 - a. Install/plant between March 15 and June 15 and/or September 15 and November 30
3. **Perennials**
 - a. Install/plant between March 15 and June 15 and/or September 15 and November 30
4. **Spring Flowering Bulbs**
 - a. Install/plant between September 15 and December 15
5. **Seasonal Annuals**
 - a. Install/plant in season per approved schedule
6. **Turf Grass**
 - a. Install/plant between March 15 and May 15 and/or September 15 and November 30
 - b. Do not install/plant seed or sod turf grass areas when ambient air temperature is below forty (40) degrees Fahrenheit, or forecast for a twelve (12) hour period after completion of work

1. Position plants to show the most-prominent and well-formed face to most-public view
2. Field locate plants and location/spacing/dimension of planting beds on project site prior to beginning installation
3. Verify location of individual plants and plant beds prior to beginning installation. Do not proceed without Owner approval

1. Pursue work continuously without delay or interruption until completion unless notified otherwise by Owner.

2. Prepare project submittals ahead of commencement of work. Landscape Architect requires a minimum of ten (10) working days from date of receipt for review of submittals and response to Owner and Contractor. Plan accordingly for procurement of materials.

3. Continuously update implementation schedule and notify Owner of progress. Delays related to material availability are not cause for non-completion of scheduled delivery of work.

4. Retain records of delays due to weather or site conditions until confirmed upon final finding. Provide records to Owner for remedy of schedule delays. Do not work, place or modify frozen soil.

5. Report delays due to extraordinary natural or other conditions beyond control of Contractor.

1. Remove trash, debris and work materials from site prior to request for substantial completion. Thoroughly clean surfaces impacted by work including building, parking areas, roadways, sidewalks, signs, lights, site furnishings, etc.
2. Repair any damage to existing conditions that occurred during execution of work.
3. All clean-up and demobilization procedures shall be performed to satisfaction of the Owner and Landscape Architect.

BUFFER PLANTING
20' WIDTH EXTENDING THE LENGTH OF THE DEVELOPMENT
AREA, EVERGREEN TREES (4' HT MIN AT REFLECTOR) IN ROWS
OF 15' APART AND STAGGERED 10' O.C.; REFER TO DETAIL 2,
CP-502.

Illex opaca / American Holly
Illex x 'Nellie R. Stevens' / Nellie R. Stevens Holly
Magnolia grandiflora 'Little Gem' / Little Gem Dwarf Southern Magnolia
Pinus taeda / Loblolly Pine
Pinus virginiana / Virginia Pine



- A. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
- B. WHEN SHRUBS ARE PRUNED IN MASSES, PRUNE ALL SHRUBS TO ACHIEVE UNIFORM MASS / HEIGHT.
- C. ALL SHRUBS AND GROUNDCOVERS SHALL BE PLUMB VERTICALLY, UNLESS OTHERWISE DIRECTED BY OWNERS REPRESENTATIVE.

NTS

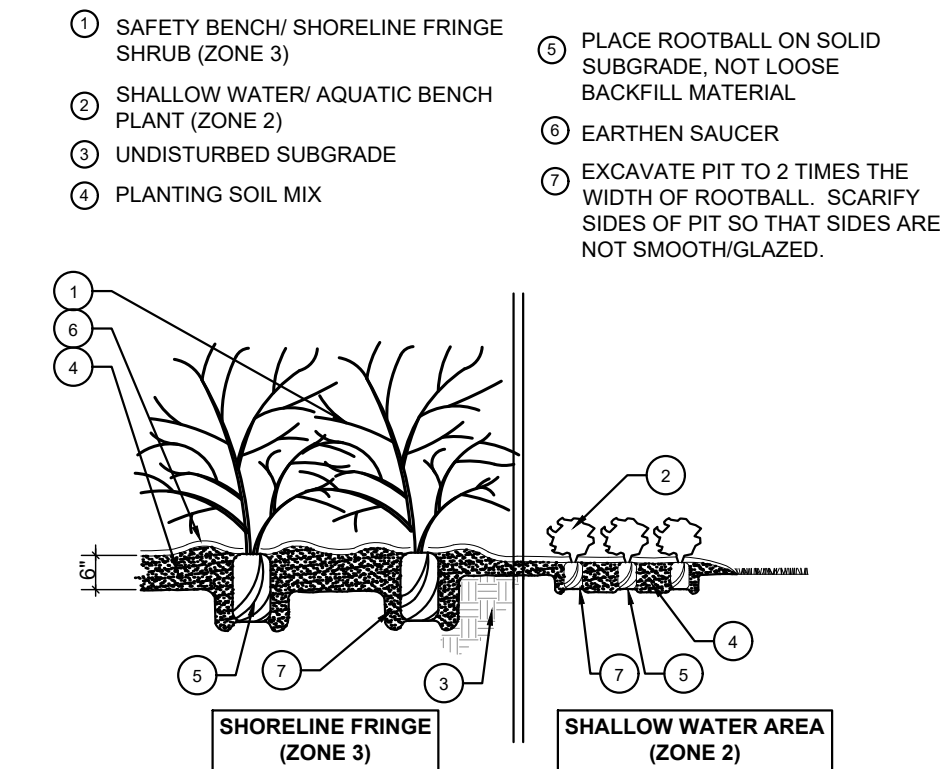


NTS

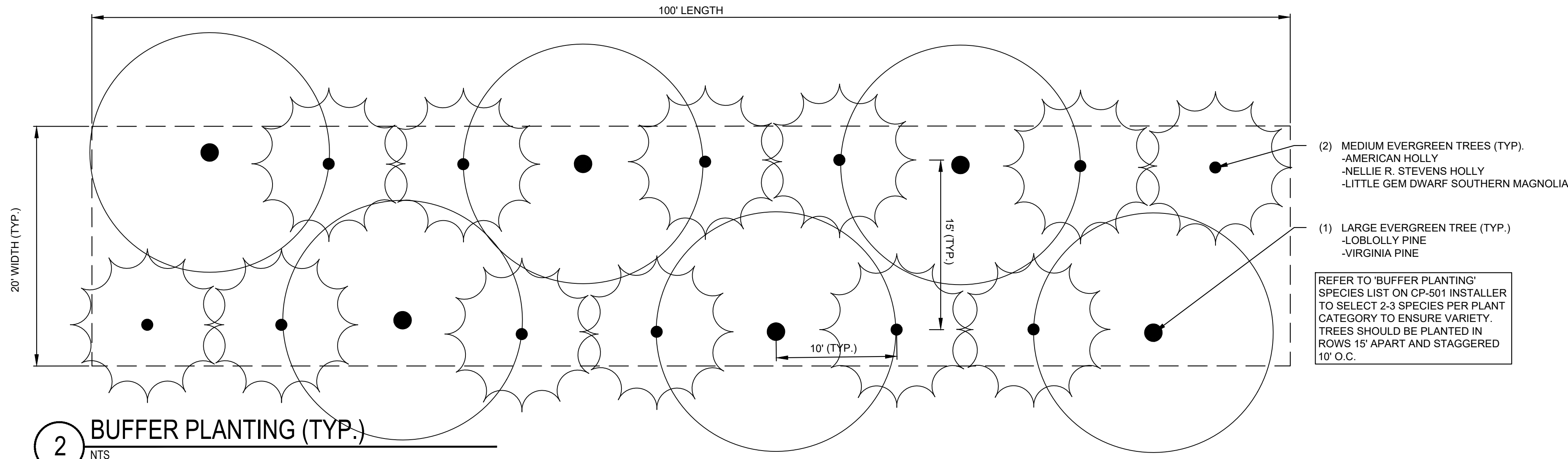
Plotted By:McGray, Stephen Sheet Set:Kha Layout:CP-502 PLANTING DETAILS & TABULATIONS November 05, 2025 04:55:48pm
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POND A VEGETATION SCHEDULE												
Type: Wet Pond					Level: 2		Shallow Water Area:			17,406 sf	Shoreline Fringe:	11,448 sf
	Zone	Quantity	Botanical Name	Common Name	Form	Maximum Depth	Size	Spacing	Plant	Area per Plant	Coverage Area	
AQUATIC BENCH	Shallow Water Area (Zone 2)	75	<i>Acorus calamus</i>	Sweetflag	Perimeter	3 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	675 sf	
	Shallow Water Area (Zone 2)	75	<i>Iris versicolor</i>	Blue Flag Iris	Emergent	3 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	675 sf	
	Shallow Water Area (Zone 2)	85	<i>Juncus effusus</i>	Soft Rush	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	765 sf	
	Shallow Water Area (Zone 2)	75	<i>Panicum virgatum</i>	Switchgrass	Perimeter	3 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	675 sf	
	Shallow Water Area (Zone 2)	87	<i>Peltandra virginica</i>	Arrow Arum	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	783 sf	
	Shallow Water Area (Zone 2)	85	<i>Juncus tenuis</i>	Path Rush	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	765 sf	
	Shallow Water Area (Zone 2)	85	<i>Pontederia cordata</i>	Pickereel Weed	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	765 sf	
	Shallow Water Area (Zone 2)	75	<i>Sagittaria latifolia</i>	Arrowhead	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	675 sf	
	Shallow Water Area (Zone 2)	75	<i>Typha latifolia</i>	Broadleaf Cattail	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	675 sf	
	Shallow Water Area (Zone 2)	85	<i>Scirpus cyperinus</i>	Woolgrass	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	765 sf	
	Shallow Water Area (Zone 2)	85	<i>Asclepias incarnata</i>	Swamp Milkweed	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	765 sf	
											Total Coverage	7,983 sf
WETLAND POCKET	Shallow Water Area (Zone 2)	88	<i>Acorus calamus</i>	Sweetflag	Perimeter	3 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	792 sf	
	Shallow Water Area (Zone 2)	98	<i>Andropogon virginicus</i>	Broomsedge	Perimeter	3 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	882 sf	
	Shallow Water Area (Zone 2)	86	<i>Iris versicolor</i>	Blue Flag Iris	Emergent	3 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	774 sf	
	Shallow Water Area (Zone 2)	85	<i>Juncus effusus</i>	Soft Rush	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	765 sf	
	Shallow Water Area (Zone 2)	80	<i>Panicum virgatum</i>	Switchgrass	Perimeter	3 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	720 sf	
	Shallow Water Area (Zone 2)	86	<i>Peltandra virginica</i>	Arrow Arum	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	774 sf	
	Shallow Water Area (Zone 2)	88	<i>Juncus tenuis</i>	Path Rush	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	792 sf	
	Shallow Water Area (Zone 2)	88	<i>Pontederia cordata</i>	Pickereel Weed	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	792 sf	
	Shallow Water Area (Zone 2)	98	<i>Sagittaria latifolia</i>	Arrowhead	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	882 sf	
	Shallow Water Area (Zone 2)	86	<i>Typha latifolia</i>	Broadleaf Cattail	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	774 sf	
	Shallow Water Area (Zone 2)	78	<i>Scirpus cyperinus</i>	Woolgrass	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	702 sf	
	Shallow Water Area (Zone 2)	86	<i>Asclepias incarnata</i>	Swamp Milkweed	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	774 sf	
										Total Coverage	9,423 sf	
SAFETY BENCH	Zone	Quantity	Botanical Name	Common Name	Form	Maximum Depth	Size	Spacing	Plant	Area per Plant	Coverage Area	
	Shoreline Fringe (Zone 3)	72	<i>Acorus calamus</i>	Sweetflag	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	648 sf	
	Shoreline Fringe (Zone 3)	75	<i>Carex pensylvanica</i>	Pennsylvania Sedge	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	675 sf	
	Shoreline Fringe (Zone 3)	82	<i>Cephalanthus occidentalis</i>	Buttonbush	Dec. Shrub	N/A	15-18 in.	5' o.c.	Cont.	36 sf	2,952 sf	
	Shoreline Fringe (Zone 3)	85	<i>Hibiscus moscheutos</i>	Marsh Hibiscus	Emergent	12 in.	Sprig (4 Stem Min)	2' o.c.	Cont.	9 sf	765 sf	
	Shoreline Fringe (Zone 3)	80	<i>Pontederia cordata</i>	Pickereel Weed	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	720 sf	
	Shoreline Fringe (Zone 3)	66	<i>Aronia arbutifolia</i>	Red Chokeberry	Dec. Shrub	N/A	15-18 in.	4' o.c.	Cont.	36 sf	2,376 sf	
	Shoreline Fringe (Zone 3)	68	<i>Juncus effusus</i>	Soft Rush	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	612 sf	
Shoreline Fringe (Zone 3)	75	<i>Viburnum nudum</i>	Possomhaw Viburnum	Dec. Shrub	N/A	15-18 in.	4' o.c.	Cont.	36 sf	2,700 sf		
										Total Coverage	11,448 sf	

POND B VEGETATION SCHEDULE											
Type: Wet Pond Level: 2 Shallow Water Area: 5,049 sf Shoreline Fringe: 4,707 sf											
AQUATIC BENCH	Zone	Quantity	Botanical Name	Common Name	Form	Maximum Depth	Size	Spacing	Plant	Area per Plant	Coverage Area
	Shallow Water Area (Zone 2)	30	<i>Acorus calamus</i>	Sweetflag	Perimeter	3 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	270 sf
	Shallow Water Area (Zone 2)	35	<i>Iris versicolor</i>	Blue Flag Iris	Emergent	3 in.	Sprig (4 Stem Mn)	3' o.c.	Cont.	9 sf	315 sf
	Shallow Water Area (Zone 2)	30	<i>Juncus effusus</i>	Soft Rush	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	270 sf
	Shallow Water Area (Zone 2)	25	<i>Panicum virgatum</i>	Switchgrass	Perimeter	3 in.	Sprig (4 Stem Mn)	3' o.c.	Cont.	9 sf	225 sf
	Shallow Water Area (Zone 2)	30	<i>Peltandra virginica</i>	Arrow Arum	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	270 sf
	Shallow Water Area (Zone 2)	25	<i>Juncus tenuis</i>	Path Rush	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	225 sf
	Shallow Water Area (Zone 2)	35	<i>Pontederia cordata</i>	Pickereel Weed	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	315 sf
	Shallow Water Area (Zone 2)	20	<i>Sagittaria latifolia</i>	Arrowhead	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Cont.	9 sf	180 sf
	Shallow Water Area (Zone 2)	15	<i>Typha latifolia</i>	Broadleaf Cattail	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	135 sf
	Shallow Water Area (Zone 2)	25	<i>Scirpus cyperinus</i>	Woolgrass	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	225 sf
	Shallow Water Area (Zone 2)	25	<i>Asclepias incarnata</i>	Swamp Milkweed	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Cont.	9 sf	225 sf
	Total Coverage										2,655 sf
WETLAND POCKET	Zone	Quantity	Botanical Name	Common Name	Form	Maximum Depth	Size	Spacing	Plant	Area per Plant	Coverage Area
	Shallow Water Area (Zone 2)	28	<i>Acorus calamus</i>	Sweetflag	Perimeter	3 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	252 sf
	Shallow Water Area (Zone 2)	15	<i>Andropogon virginicus</i>	Broomsedge	Perimeter	3 in.	Sprig (4 Stem Mn)	3' o.c.	Cont.	9 sf	135 sf
	Shallow Water Area (Zone 2)	30	<i>Iris versicolor</i>	Blue Flag Iris	Emergent	3 in.	Sprig (4 Stem Mn)	3' o.c.	Cont.	9 sf	270 sf
	Shallow Water Area (Zone 2)	25	<i>Juncus effusus</i>	Soft Rush	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	225 sf
	Shallow Water Area (Zone 2)	25	<i>Panicum virgatum</i>	Switchgrass	Perimeter	3 in.	Sprig (4 Stem Mn)	3' o.c.	Cont.	9 sf	225 sf
	Shallow Water Area (Zone 2)	25	<i>Peltandra virginica</i>	Arrow Arum	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	225 sf
	Shallow Water Area (Zone 2)	15	<i>Juncus tenuis</i>	Path Rush	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	135 sf
	Shallow Water Area (Zone 2)	25	<i>Pontederia cordata</i>	Pickereel Weed	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	225 sf
	Shallow Water Area (Zone 2)	15	<i>Sagittaria latifolia</i>	Arrowhead	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Cont.	9 sf	135 sf
	Shallow Water Area (Zone 2)	15	<i>Typha latifolia</i>	Broadleaf Cattail	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	135 sf
	Shallow Water Area (Zone 2)	18	<i>Scirpus cyperinus</i>	Woolgrass	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	162 sf
	Shallow Water Area (Zone 2)	30	<i>Asclepias incarnata</i>	Swamp Milkweed	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Cont.	9 sf	270 sf
Total Coverage										2,394 sf	
SAFETY BENCH	Zone	Quantity	Botanical Name	Common Name	Form	Maximum Depth	Size	Spacing	Plant	Area per Plant	Coverage Area
	Shoreline Fringe (Zone 3)	38	<i>Acorus calamus</i>	Sweetflag	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	342 sf
	Shoreline Fringe (Zone 3)	35	<i>Carex pensylvanica</i>	Pennsylvania Sedge	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	315 sf
	Shoreline Fringe (Zone 3)	30	<i>Cephalanthus occidentalis</i>	Buttonbush	Dec. Shrub	N/A	15-18 in.	5' o.c.	Cont.	36 sf	1,080 sf
	Shoreline Fringe (Zone 3)	35	<i>Hibiscus moscheutos</i>	Marsh Hibiscus	Emergent	12 in.	Sprig (4 Stem Mn)	2' o.c.	Cont.	9 sf	315 sf
	Shoreline Fringe (Zone 3)	30	<i>Pontederia cordata</i>	Pickereel Weed	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	270 sf
	Shoreline Fringe (Zone 3)	30	<i>Aronia arbutifolia</i>	Red Chokeberry	Dec. Shrub	N/A	15-18 in.	4' o.c.	Cont.	36 sf	1,080 sf
	Shoreline Fringe (Zone 3)	25	<i>Juncus effusus</i>	Soft Rush	Emergent	12 in.	Sprig (4 Stem Mn)	3' o.c.	Bare Root	9 sf	225 sf
Shoreline Fringe (Zone 3)	30	<i>Viburnum nudum</i>	Possomhaw Viburnum	Dec. Shrub	N/A	15-18 in.	4' o.c.	Cont.	36 sf	1,080 sf	
Total Coverage										4,707 sf	

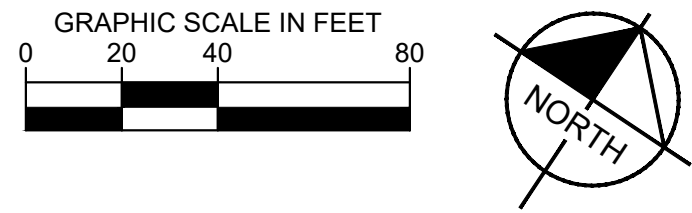


1 BMP PLANTING
Not To Scale

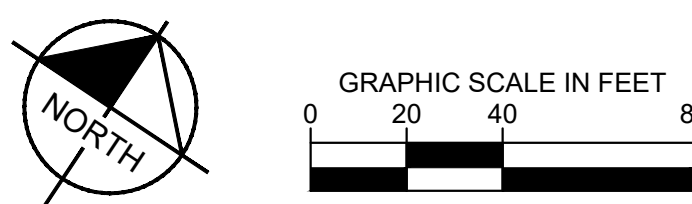
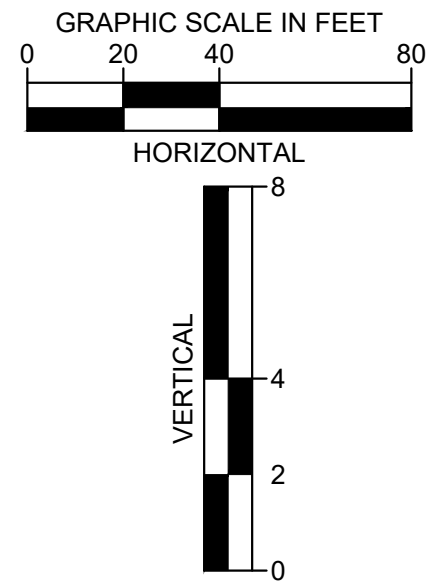
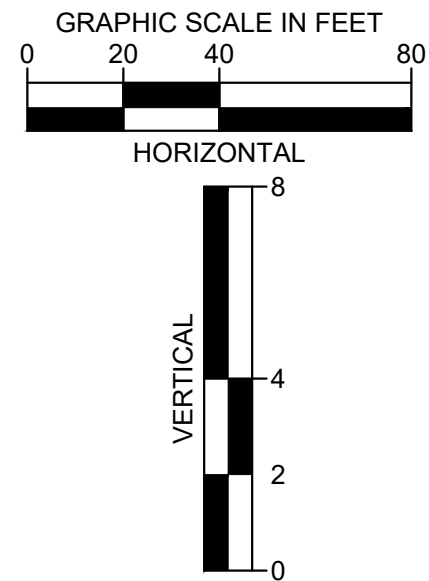


2 BUFFER PLANTING (TYP.)
NTS

POND C VEGETATION SCHEDULE											
Type: Wet Pond				Level: 2		Shallow Water Area:		9,513 sf		Shoreline Fringe: 6,075 sf	
Zone	Quantity	Botanical Name	Common Name	Form	Maximum Depth	Size	Spacing	Plant	Area per Plant	Coverage Area	
Shallow Water Area (Zone 2)	38	<i>Acorus calamus</i>	Sweetflag	Perimeter	3 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	342 sf	
Shallow Water Area (Zone 2)	55	<i>Iris versicolor</i>	Blue Flag Iris	Emergent	3 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	495 sf	
Shallow Water Area (Zone 2)	40	<i>Juncus effusus</i>	Soft Rush	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	360 sf	
Shallow Water Area (Zone 2)	40	<i>Panicum virgatum</i>	Switchgrass	Perimeter	3 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	360 sf	
Shallow Water Area (Zone 2)	40	<i>Peltandra virginica</i>	Arrow Arum	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	360 sf	
Shallow Water Area (Zone 2)	50	<i>Juncus tenuis</i>	Path Rush	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	450 sf	
Shallow Water Area (Zone 2)	50	<i>Pontederia cordata</i>	Pickernel Weed	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	450 sf	
Shallow Water Area (Zone 2)	50	<i>Sagittaria latifolia</i>	Arrowhead	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	450 sf	
Shallow Water Area (Zone 2)	35	<i>Typha latifolia</i>	Broadleaf Cattail	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	315 sf	
Shallow Water Area (Zone 2)	40	<i>Scirpus cyperinus</i>	Woolgrass	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	360 sf	
Shallow Water Area (Zone 2)	40	<i>Asclepias incarnata</i>	Swamp Milkweed	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	360 sf	
									Total Coverage	4,302 sf	
Zone	Quantity	Botanical Name	Common Name	Form	Maximum Depth	Size	Spacing	Plant	Area per Plant	Coverage Area	
Shallow Water Area (Zone 2)	45	<i>Acorus calamus</i>	Sweetflag	Perimeter	3 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	405 sf	
Shallow Water Area (Zone 2)	40	<i>Andropogon virginicus</i>	Broomsedge	Perimeter	3 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	360 sf	
Shallow Water Area (Zone 2)	55	<i>Iris versicolor</i>	Blue Flag Iris	Emergent	3 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	495 sf	
Shallow Water Area (Zone 2)	55	<i>Juncus effusus</i>	Soft Rush	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	495 sf	
Shallow Water Area (Zone 2)	35	<i>Panicum virgatum</i>	Switchgrass	Perimeter	3 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	315 sf	
Shallow Water Area (Zone 2)	48	<i>Peltandra virginica</i>	Arrow Arum	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	432 sf	
Shallow Water Area (Zone 2)	56	<i>Juncus tenuis</i>	Path Rush	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	504 sf	
Shallow Water Area (Zone 2)	45	<i>Pontederia cordata</i>	Pickernel Weed	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	405 sf	
Shallow Water Area (Zone 2)	45	<i>Sagittaria latifolia</i>	Arrowhead	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	405 sf	
Shallow Water Area (Zone 2)	35	<i>Typha latifolia</i>	Broadleaf Cattail	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	315 sf	
Shallow Water Area (Zone 2)	55	<i>Scirpus cyperinus</i>	Woolgrass	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	495 sf	
Shallow Water Area (Zone 2)	65	<i>Asclepias incarnata</i>	Swamp Milkweed	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Cont.	9 sf	585 sf	
									Total Coverage	5,211 sf	
Zone	Quantity	Botanical Name	Common Name	Form	Maximum Depth	Size	Spacing	Plant	Area per Plant	Coverage Area	
Shoreline Fringe (Zone 3)	40	<i>Acorus calamus</i>	Sweetflag	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	360 sf	
Shoreline Fringe (Zone 3)	45	<i>Carex pensylvanica</i>	Pennsylvania Sedge	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	405 sf	
Shoreline Fringe (Zone 3)	45	<i>Cephalanthus occidentalis</i>	Buttonbush	Dec. Shrub	N/A	15-18 in.	5' o.c.	Cont.	36 sf	1,620 sf	
Shoreline Fringe (Zone 3)	35	<i>Hibiscus moscheutos</i>	Marsh Hibiscus	Emergent	12 in.	Sprig (4 Stem Min)	2' o.c.	Cont.	9 sf	315 sf	
Shoreline Fringe (Zone 3)	45	<i>Pontederia cordata</i>	Pickernel Weed	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	405 sf	
Shoreline Fringe (Zone 3)	40	<i>Aronia arbutifolia</i>	Red Chokeberry	Dec. Shrub	N/A	15-18 in.	4' o.c.	Cont.	36 sf	1,440 sf	
Shoreline Fringe (Zone 3)	30	<i>Juncus effusus</i>	Soft Rush	Emergent	12 in.	Sprig (4 Stem Min)	3' o.c.	Bare Root	9 sf	270 sf	
Shoreline Fringe (Zone 3)	35	<i>Viburnum nudum</i>	Possumhaw Viburnum	Dec. Shrub	N/A	15-18 in.	4' o.c.	Cont.	36 sf	1,260 sf	
									Total Coverage	6,075 sf	



SIGHT DISTANCE FOR ENTRANCE - SOUTH APPROACH (RIGHT)



VEHICLE TURN EXHIBIT (WB-67 DESIGN VEHICLE)

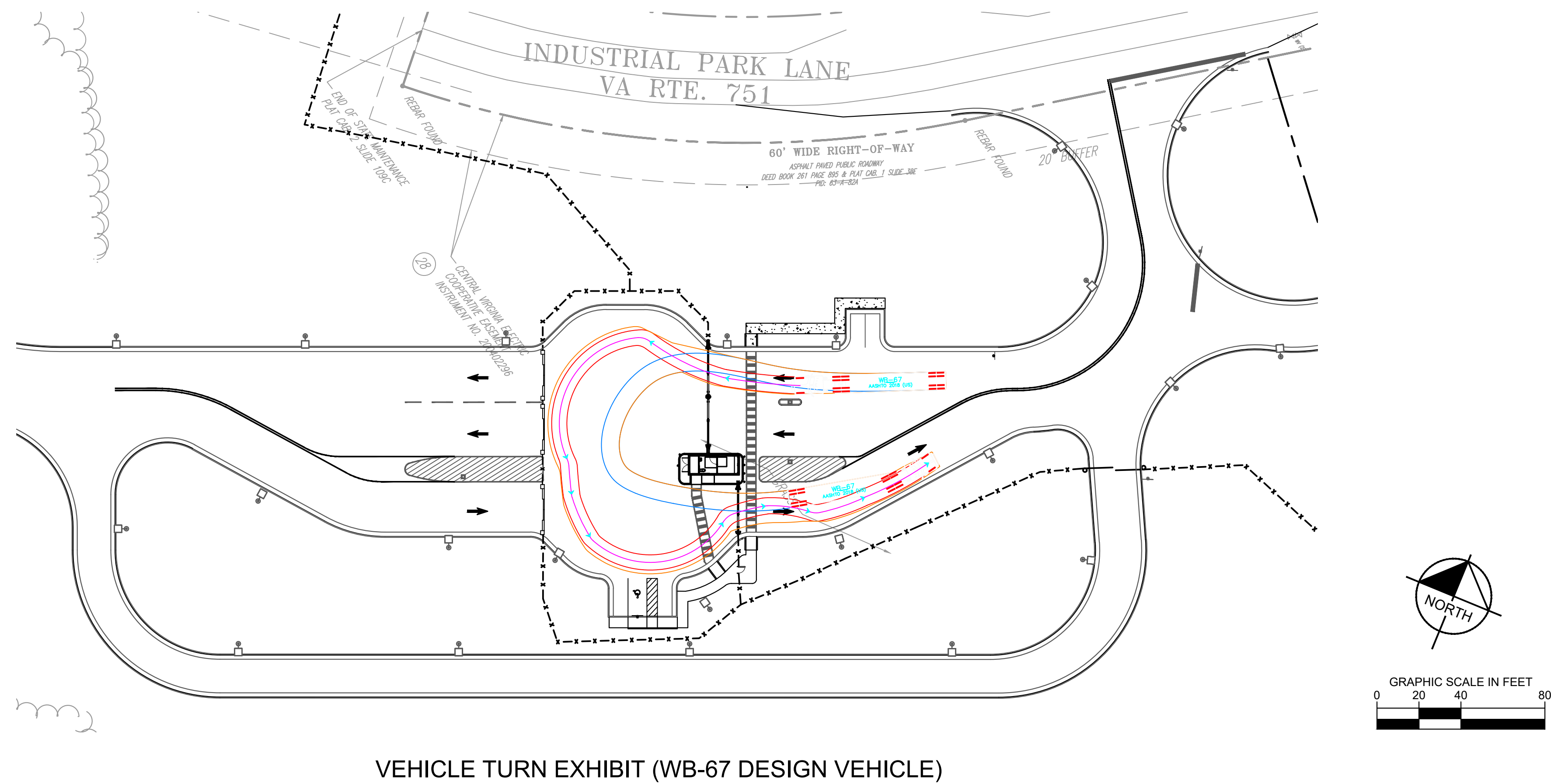


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SCALE	AS SHOWN
DESIGNED BY	STM
DRAWN BY	STM
CHECKED BY	JMM

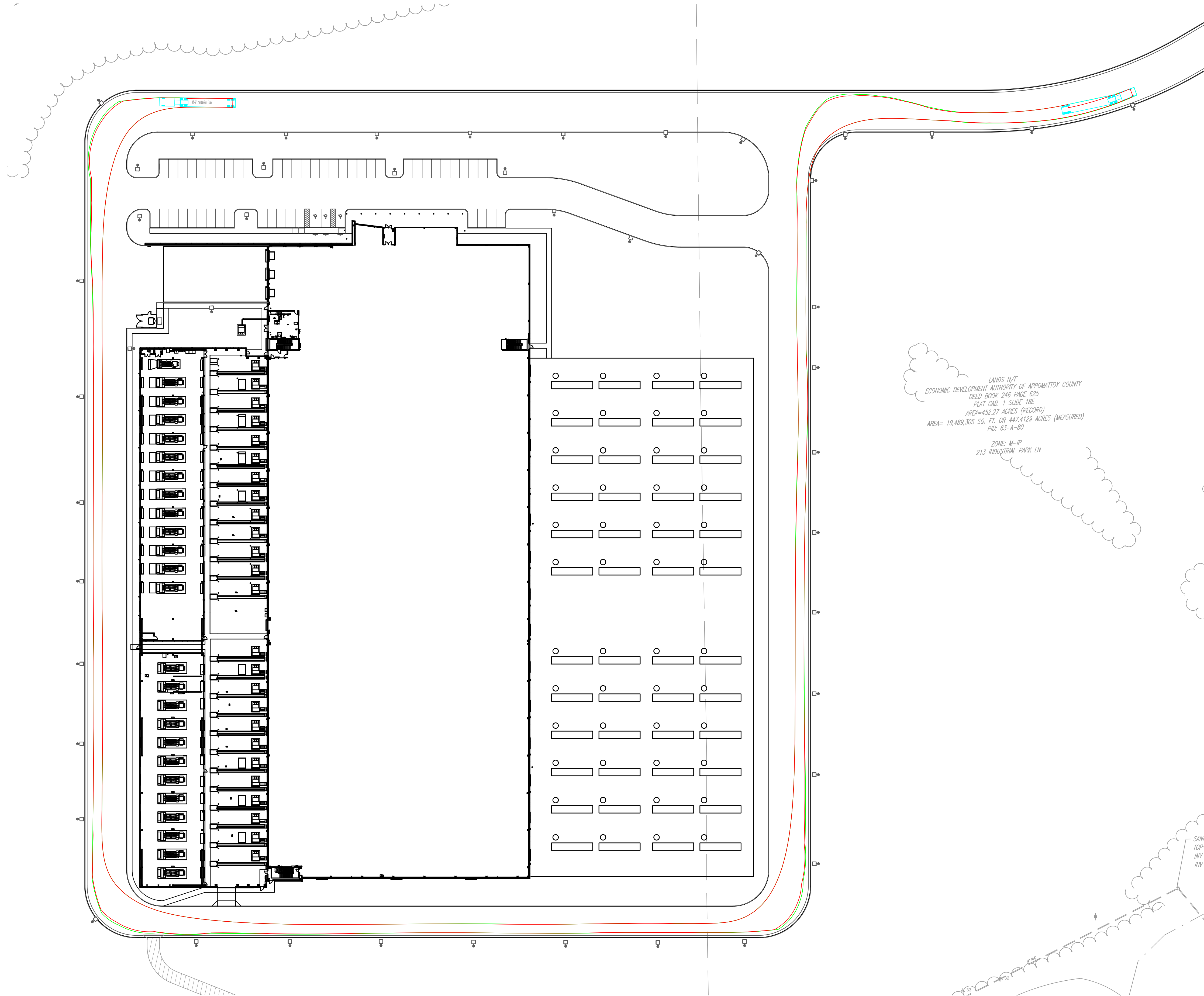
SIGHT DISTANCES AND TRUCK TURNS

PROJECT HERCULES

SHEET NUMBER
CR-101



Plotted By:McCrory, Stephen Sheet Set:Kha Layout:CR-103 SIGHT DISTANCES AND TRUCK TURNS November 08, 2025 04:56:28pm
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VEHICLE TURN EXHIBIT (WB-67 DESIGN VEHICLE)

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				DATE		11/11/2025	
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				DRAWN BY		JMM	
				CHECKED BY			
				KHA PROJECT		113706001	
				DATE		11/11/2025	
				SCALE		AS SHOWN	
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COMMONWEALTH OF VIRGINIA

JOSH M MACDONALD

Lic. No. 0402057995

11/14/2025

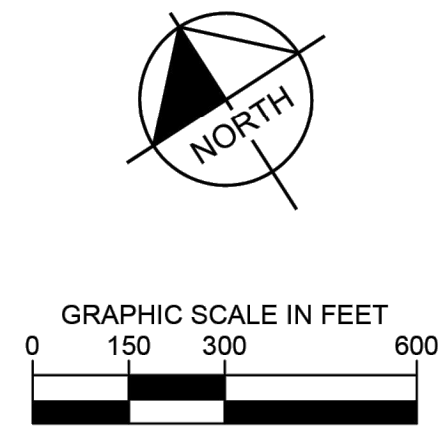
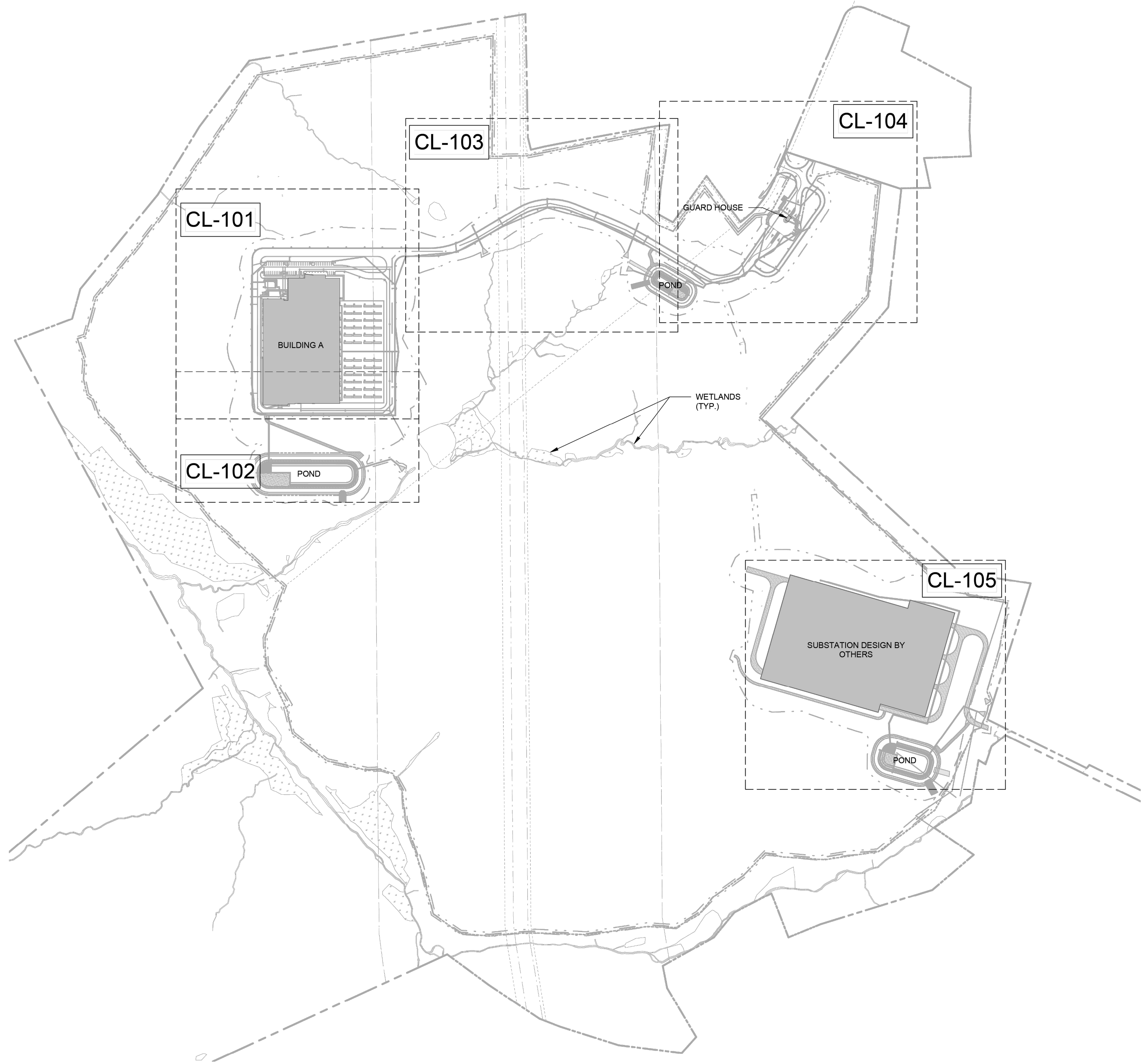
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1

SITE LIGHTING PLAN - OVERALL

1" = 300'-0"



GENERAL NOTES

A REFERENCE CIVIL PLANS FOR FINAL STATION LOCATIONS OF DEVICES. ELECTRICAL PLANS SHOW A DIAGRAMMATIC LOCATION UNLESS SPECIFICALLY DIMENSIONED ON PLANS. COORDINATE FINAL STATION LOCATION OF ELECTRICAL DEVICES WITH OTHER TRADES. CONTRACTOR TO PROVIDE FINAL DETAILED SITE PLAN WITH FINAL LOCATIONS INDICATED FOR APPROVAL.

OVERALL LIGHTING PLAN

PROJECT HERCULES

SHEET NUMBER
CL-100

APPOMATTOX COUNTY

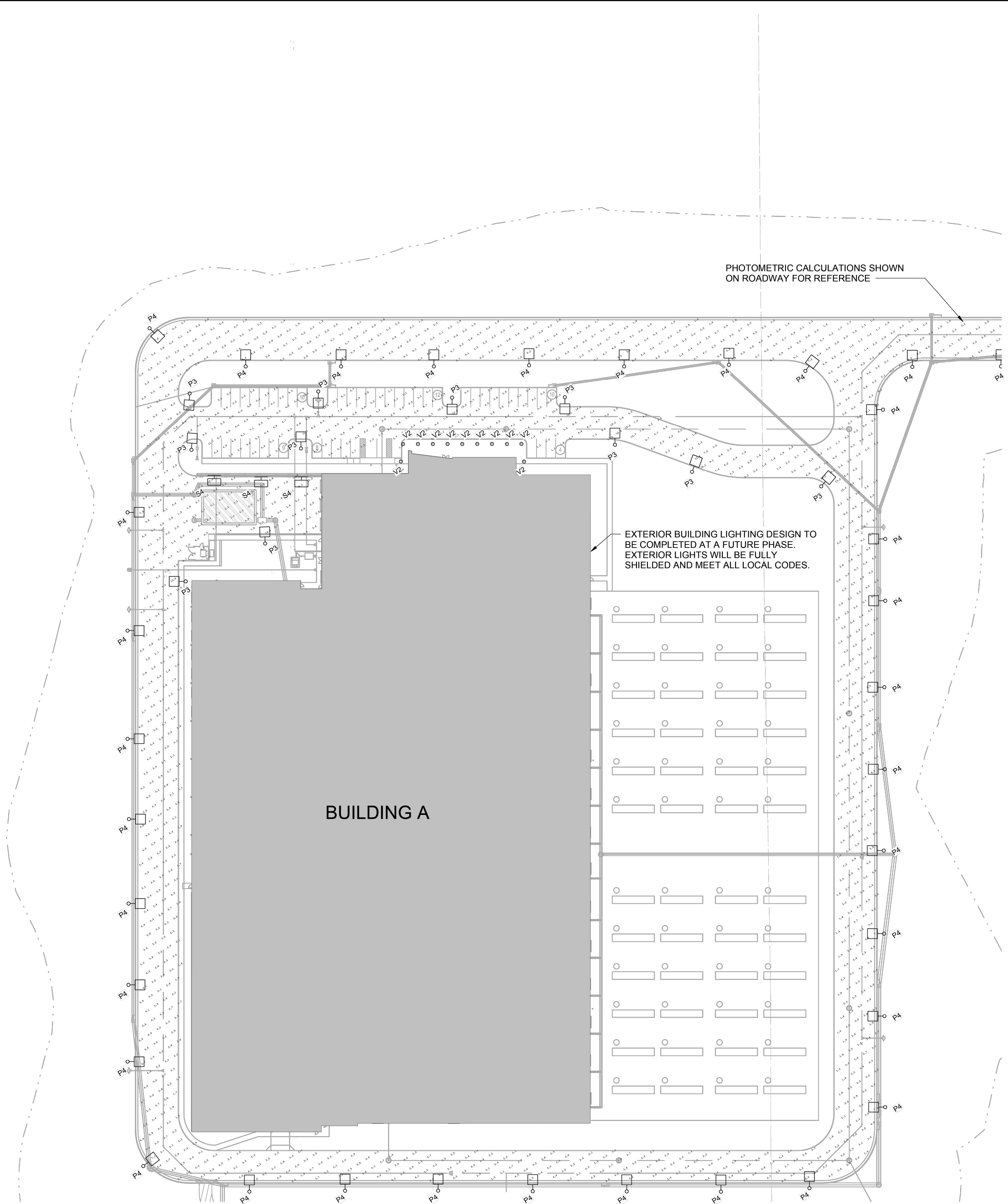
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1 SITE LIGHTING PLAN
1" = 50'-0"



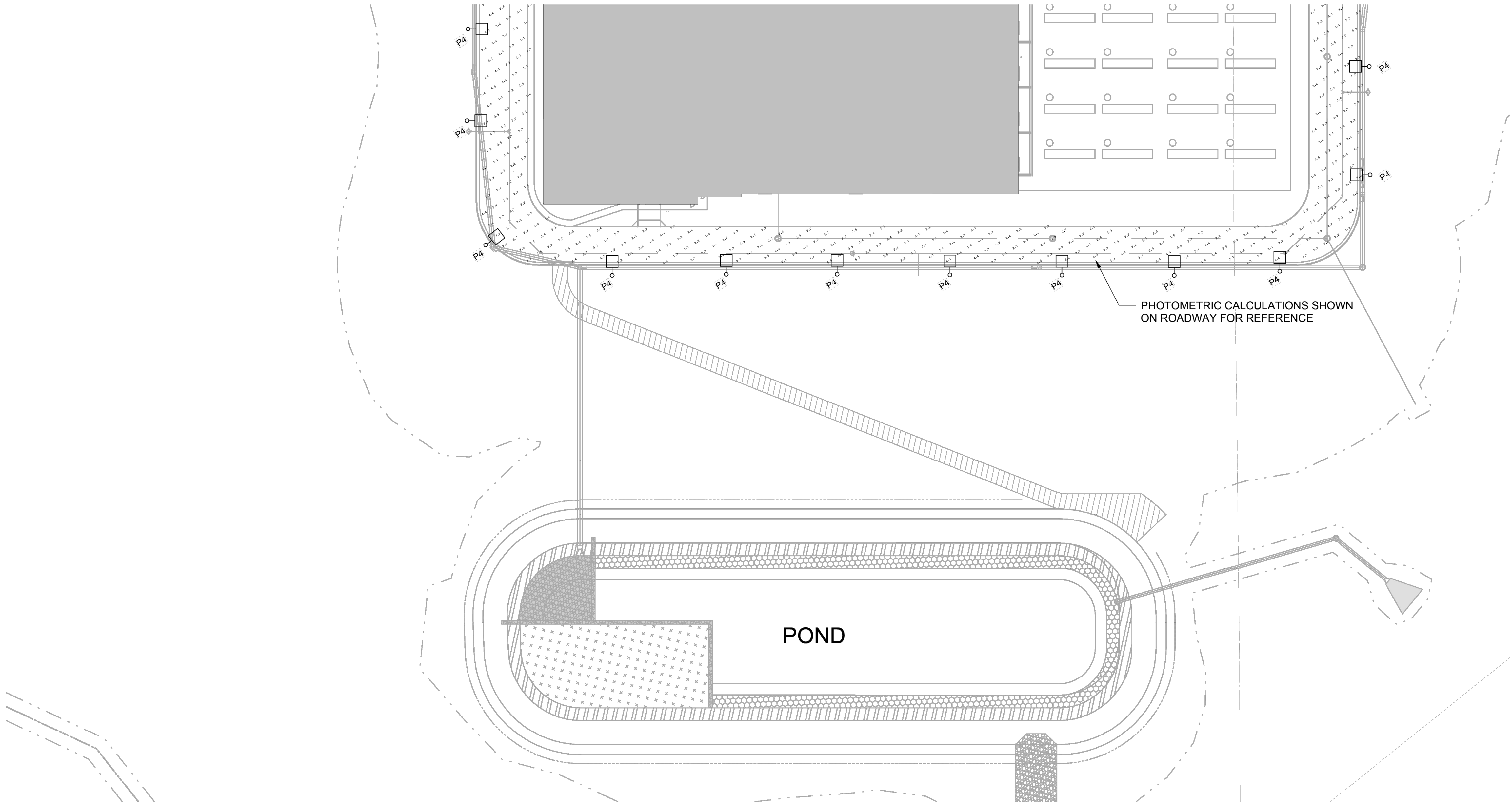
GENERAL NOTES	
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LIGHTING PLAN		SHEET NUMBER CL-101	
KHA PROJECT 113706001	DATE 11/14/2025	SCALE AS SHOWN DESIGNED BY RF DRAWN BY OG CHECKED BY JB	

1

SITE LIGHTING PLAN

1" = 50'-0"



GENERAL NOTES	
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PROJECT HERCULES

APPOMATTOX COUNTY

VA

LIGHTING PLAN

KHA PROJECT	113708001
DATE	11/14/2025
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DESIGNED BY	RF
DRAWN BY	OG
CHECKED BY	JB

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JASON R. BURBAUGH

Lic. No. 052008

11/14/25

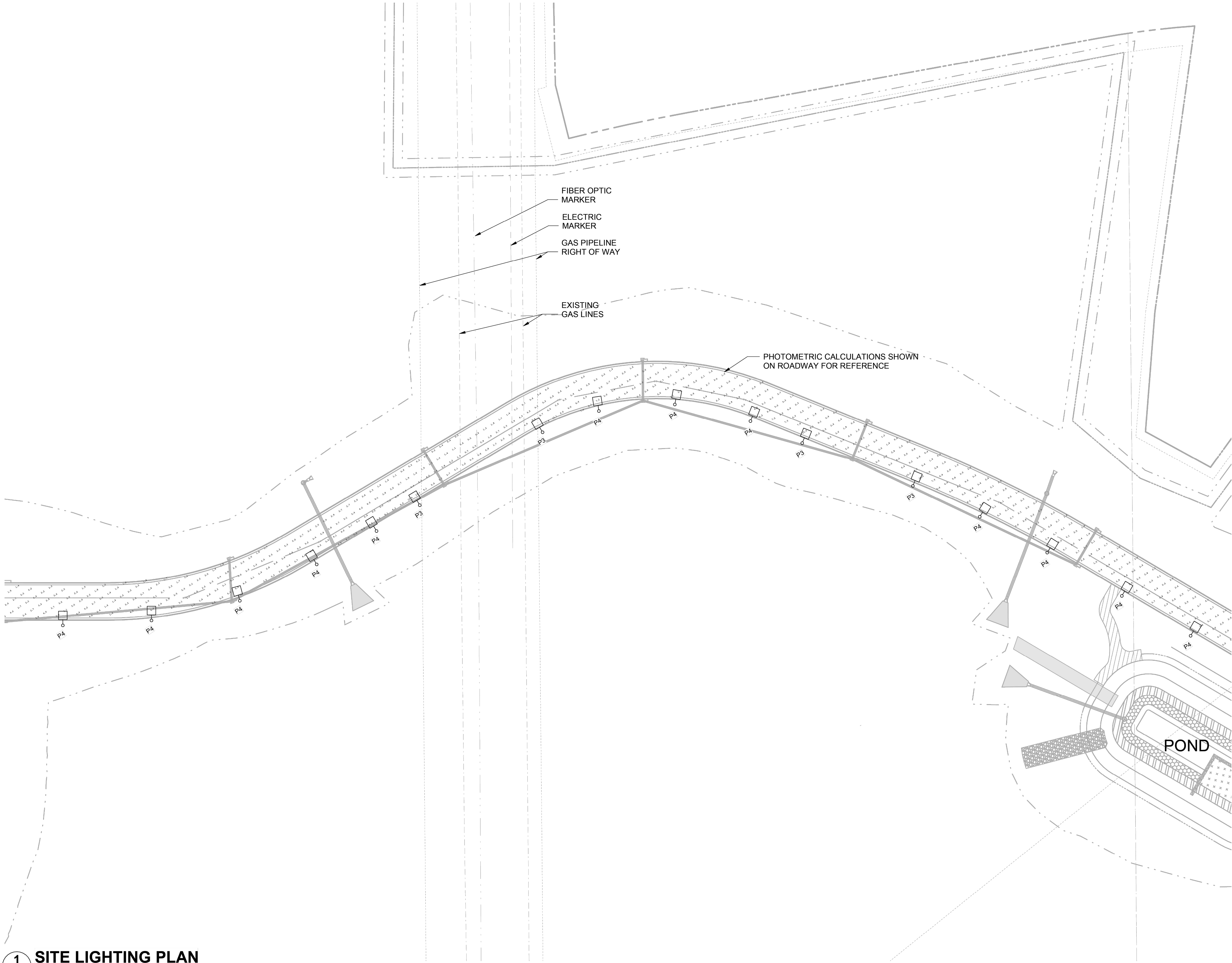
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KHA PROJECT	113706001
DATE	11/14/2025
SCALE AS SHOWN	
DESIGNED BY	RF
DRAWN BY	OG
CHECKED BY	JB

LIGHTING PLAN

PROJECT HERCULES

APPOMATTOX COUNTY

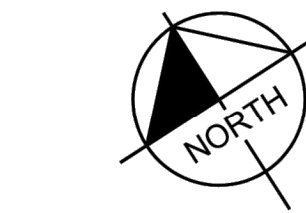
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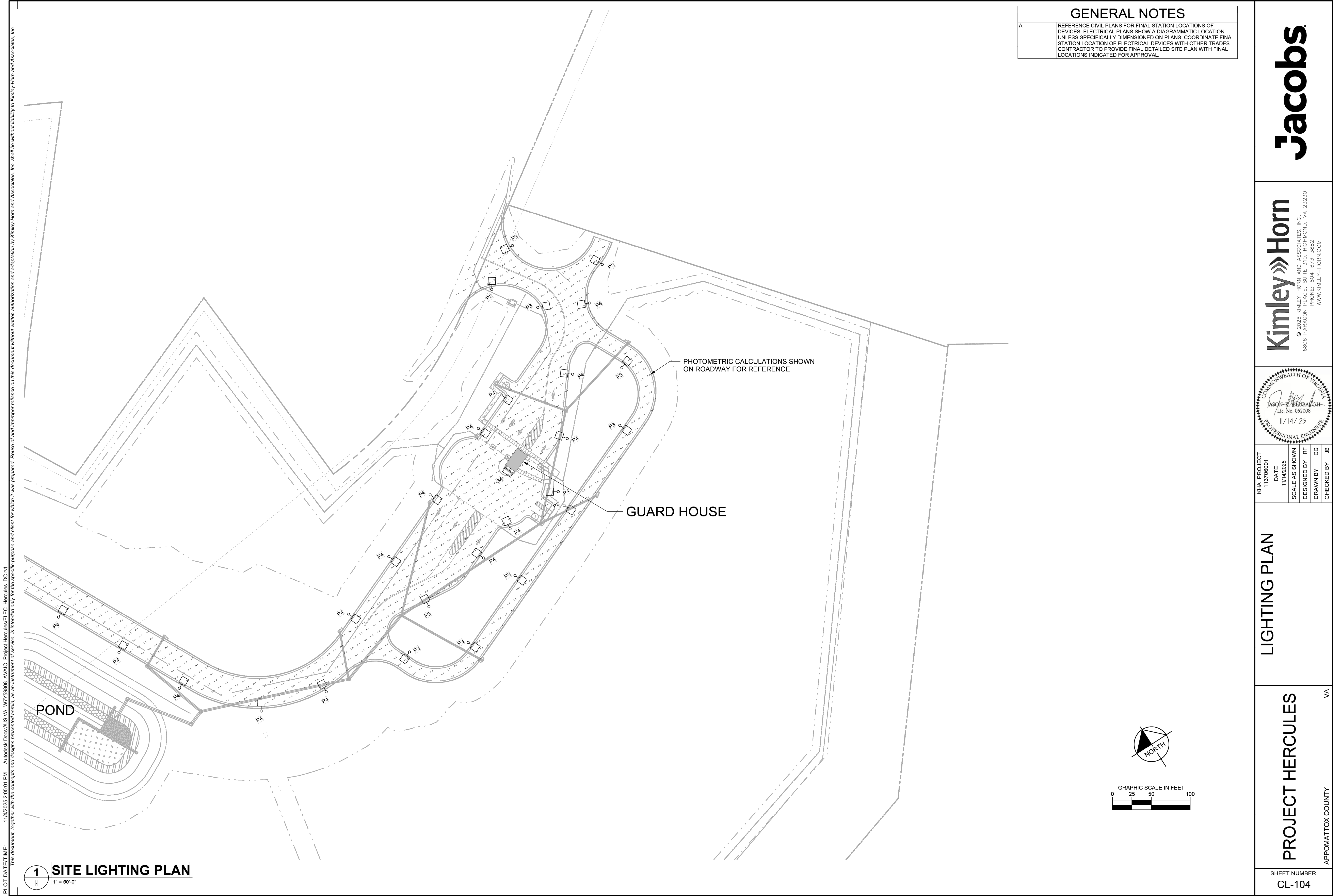


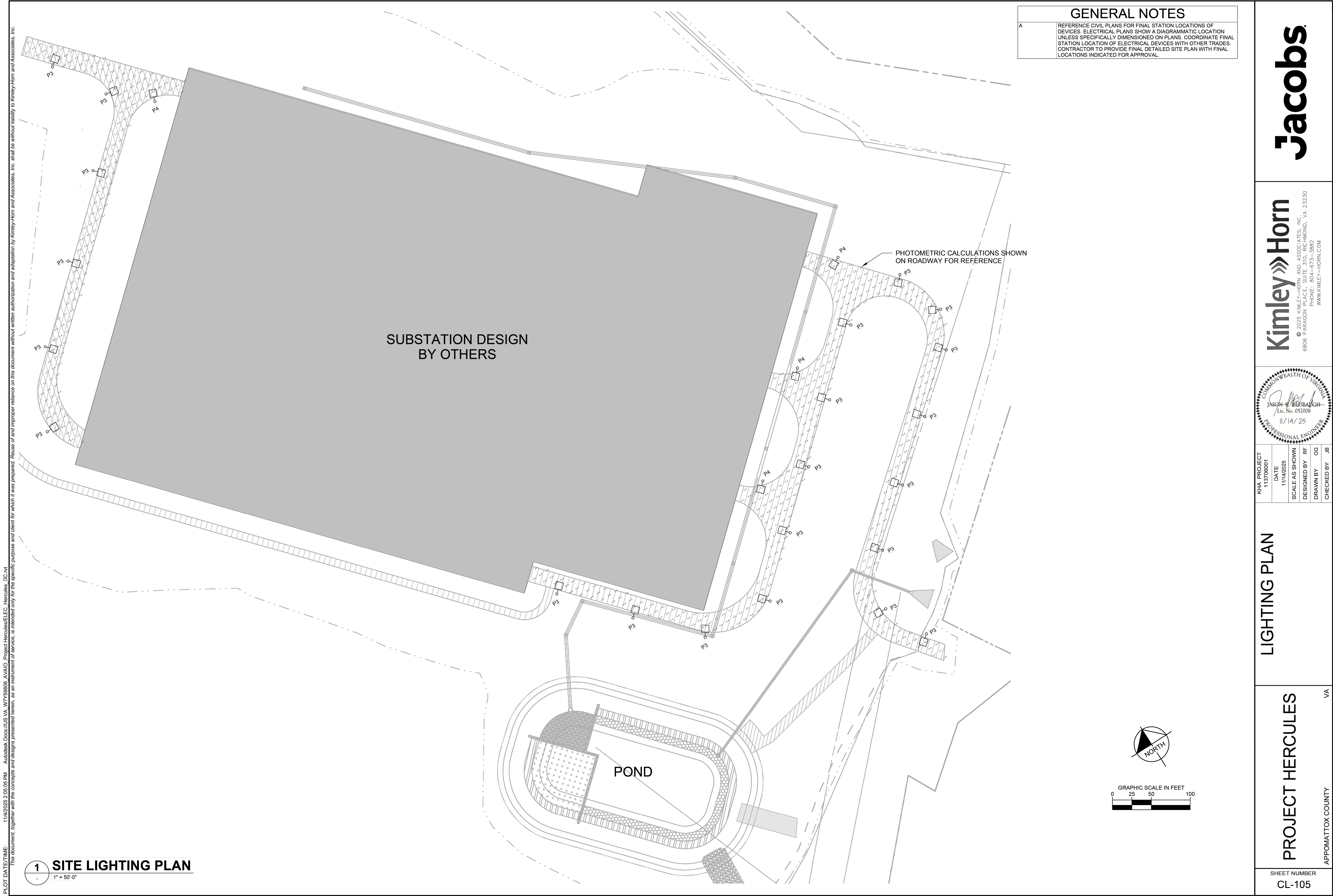
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1

SITE LIGHTING PLAN

1" = 50'-0"





FIXTURE SCHEDULE												
TYPE MARK	DESCRIPTION	LAMP	COLOR TEMP	LUMENS	BUG RATING	VOLTAGE	WATTAGE	MOUNTING	MANUFACTURER	FIXTURE NAME	LOCATION	COMMENTS
P4	CIRCULAR POLE MOUNTED SITE LIGHT	LED	5000K	20684	B3-U0-G3	120-277V	213	POLE	NLS LIGHTING	ORX-3-AM-T4-128L-53-50K7-UNV-ASA-GPH RSAP-20-4S-120-9BC-SGL-GPH-136	ROADWAY/EXTERIOR	PROVIDE 20' POLE
P3	CIRCULAR POLE MOUNTED SITE LIGHT	LED	5000K	22267	B3-U0-G3	120-277V	211	POLE	NLS LIGHTING	ORX-3-AM-T3-128L-7-50K7-UNV-ASA-GPH RSAP-20-4S-120-9BC-SGL-GPH-136	ROADWAY/EXTERIOR	PROVIDE 20' POLE
S4	CIRCULAR EXTERIOR WALL PACK	LED	5000K	9549	B2-U0-G2	120-277V	87	WALL	NLS LIGHTING	ORX-W-T4-32L-85-50K7-UNV-WM-GPH	BUILDING EXTERIOR	MOUNTING HEIGHT 10'-0" AFF
V2	CIRCULAR LED EXTERIOR BOLLARD	LED	5000K	1898	B1-U0-G1	120-277V	18	SURFACE	NLS LIGHTING	ORX-B-42-T2-16L-40-50K7-UNV-AB-GPH	WALKWAYS	

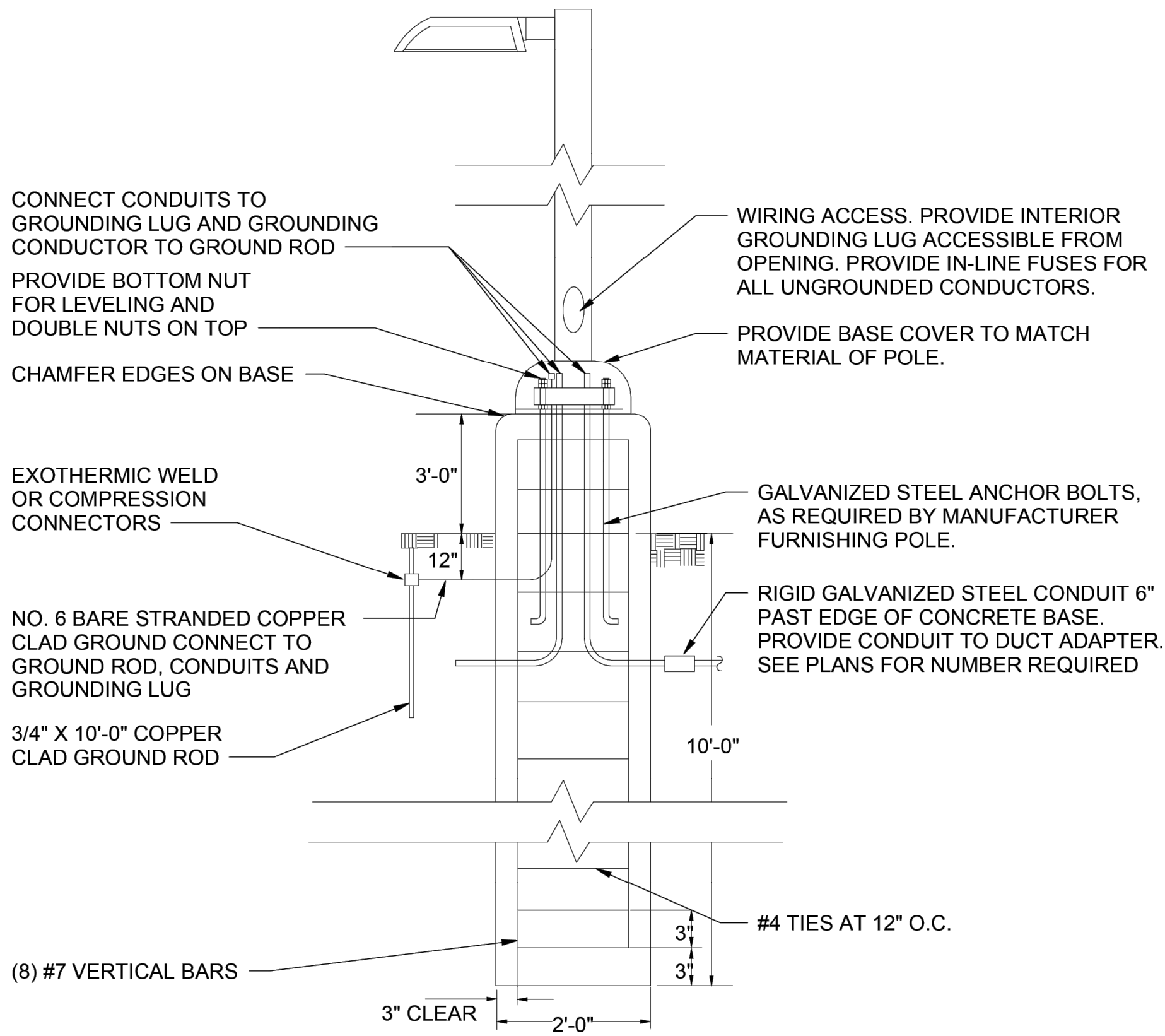
LIGHTING CONTROL SEQUENCE OF OPERATIONS													
SPACE TYPE	OCCUPANCY SENSOR	VACANCY SENSOR	MANUAL ON/OFF + CONTINUOUS DIMMING SWITCH	ONE BUTTON MANUAL SWITCH (100%)	TWO BUTTON MANUAL SWITCH (50%-100%)	CONTINUOUSLY DIMMABLE LIGHTS	STEP DIMMABLE LIGHTS (50% / 100%)	PHOTOSENSOR / PHOTOCELL CONTROL	TIME CLOCK CONTROL	TIME CLOCK MANUAL OVERRIDE BUTTON	0-10V DIMMING	KEYED NOTES	SEQUENCE OF OPERATION NOTES
EXTERIOR LIGHTING								X	X	X		1	B
PARKING LOTS	X						X	X	X	X			A

SEQUENCE OF OPERATION NOTES

- A. LIGHTS AUTOMATICALLY TURN ON TO 100% FROM SUNSET TO SUNRISE. LIGHTS AUTOMATICALLY TURN OFF FROM SUNRISE TO SUNSET. LIGHTS AUTOMATICALLY REDUCE LIGHTING LEVELS BY 50% AFTER 15 MINUTES OF WHEN SPACE BECOMES VACANT.
- B. LIGHTS AUTOMATICALLY TURN OFF WHEN DAYLIGHT IS PRESENT AND SATISFIES THE LIGHTING NEEDS.

KEYED NOTES

1. EXTERIOR LIGHTS CONTROLLED BY LIGHTING RELAY PANEL WITH INTEGRAL TIMECLOCK AND MASTER OVERRIDE SWITCH. PROVIDE PHOTOCELL ON GUARD HOUSE ROOF FACING NORTH AND ASTRONOMICAL TIME CLOCK WITH MAINTENANCE BYPASS.

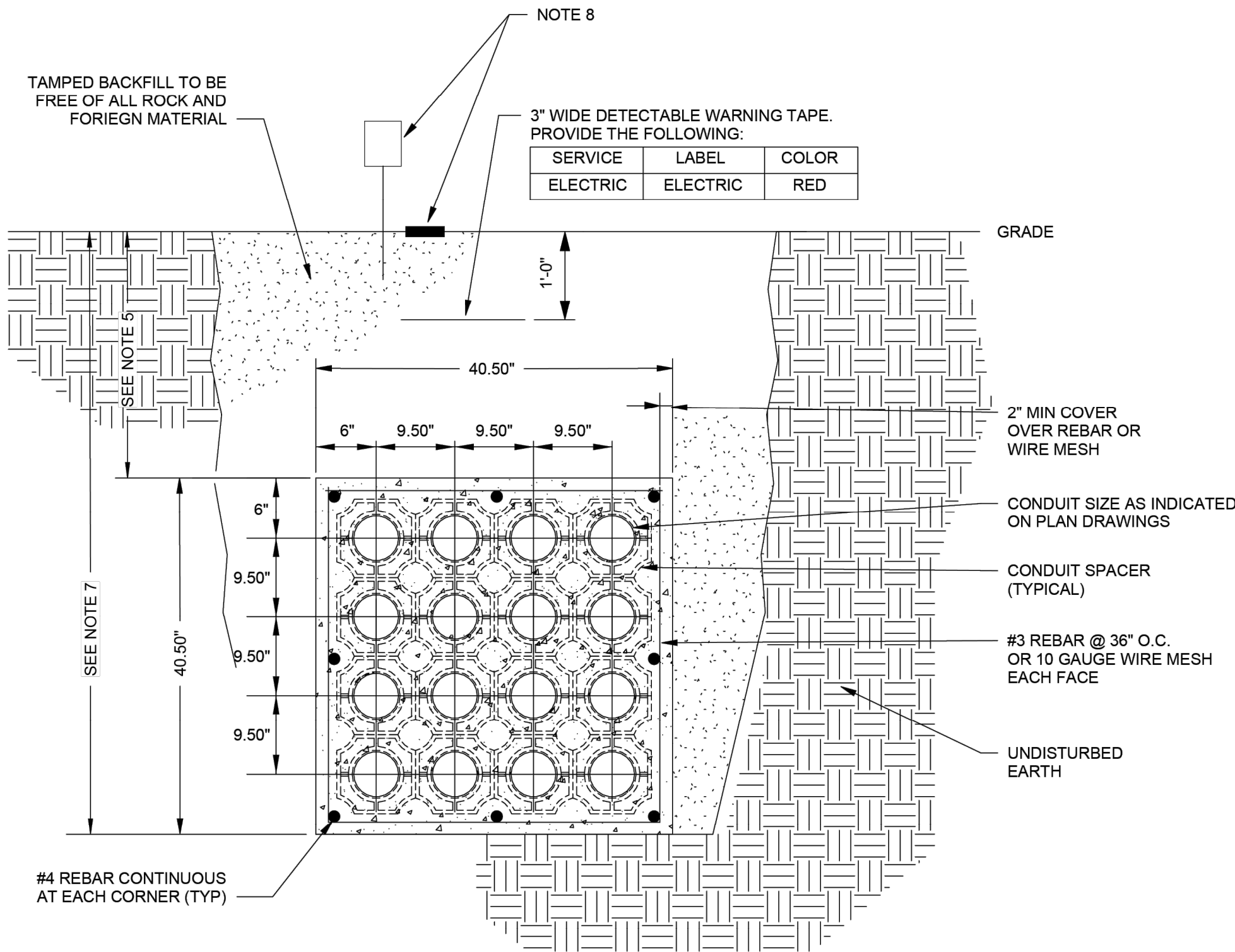


NOTE: DETAIL DIMENSIONS INDICATED ARE FOR THE 20\"/>

2 SITE LIGHT POLE BASE
NTS

GENERAL NOTES - LIGHT FIXTURE SCHEDULE

- LIGHTING FIXTURES, INSTALLATION, SUPPORT, WIRING AND RELATED WORK SHALL COMPLY WITH GENERAL NOTES, FIXTURE SCHEDULE, LAMP/BALLAST REQUIREMENT TABLES, FIXTURE DETAILS, SPECIFICATIONS AND ALL CONTRACT DRAWINGS.
- PROVIDE ALL ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION AND COORDINATE WITH WORK BY OTHER TRADES. PROVIDE ALL REQUIRED MOUNTING HARDWARE, SUPPORTS, ACCESSORIES, AND TRIM REQUIRED FOR A COMPLETE INSTALLATION. COORDINATE FIXTURE MOUNTING WITH CEILING AND WALL CONSTRUCTION WHERE INSTALLED.
- FIXTURES SHALL BE CBM APPROVED, LISTED AND LABELED BY ETL OR UL FOR DRY, DAMP, WET OR HAZARDOUS/CLASSIFIED LOCATIONS AS APPROPRIATE FOR THE INSTALLATION, UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED OR SPECIFIED IN FIXTURE SCHEDULE.
- THE MANUFACTURERS AND MODELS LISTED ON THE LIGHTING FIXTURE SCHEDULE ARE LISTED TO INDICATE THE OVERALL LEVEL OF QUALITY REQUIRED, AND LISTING OF A MANUFACTURER OR MODEL DOES NOT AMEND OR SUPERCEDE LIGHTING FIXTURE REQUIREMENTS SPECIFIED OR INDICATE. LIGHTING FIXTURES SHALL COMPLY WITH ALL DRAWING AND SPECIFICATION REQUIREMENTS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- FOR THE FIXTURE TYPES PROPOSED BY THE CONTRACTOR THAT ARE NOT LISTING AS "BASIS OF DESIGN", SUBMIT COMPLETE COMPUTERIZED POINT-BY-POINT FIXTURE LAYOUT AND ILLUMINATION CALCULATIONS, BASED ON PROPOSED FIXTURE, FIELD CONDITIONS, AND CALCULATION DATA.



NOTES:

- PROVIDE DUCTBANK REINFORCING OR RIGID STEEL CONDUIT WHEREVER DUCTBANK CROSSES UNDER CURRENT AND FUTURE ROADWAYS, PARKING LOTS, WHERE LOCATED IN UNSTABLE SOIL, WITHIN 5 FEET OF BUILDING FOUNDATIONS AND FOOTINGS, AND AS OTHERWISE INDICATED.
- WHERE REINFORCED CONCRETE DUCTBANK IS REQUIRED, PROVIDE REBAR IN EACH CORNER AND ADD AN ADDITIONAL REBAR CENTERED IN BETWEEN EACH ADDITIONAL PAIR OF CONDUITS (TYPICAL FOR EACH OF 4 SIDES).
- CONDUITS IN POWER AND CONTROL DUCTBANKS SHALL BE SCHEDULE 40 PVC.
- PROVIDE 4000PSI CONCRETE WITHIN 3' OF THE FOOTING EDGE FOR ALL DUCTBANKS THAT PASS BELOW A FOUNDATION WALL OR FOOTING.
- MINIMUM BURIAL DEPTH FOR POWER CONDUITS = 2'-0". WHERE DUCTBANKS ARE ROUTED BENEATH A BUILDING SLAB, MINIMUM BURIAL DEPTH SHALL BE PER NEC ARTICLES 300.5 AND 300.50.
- PROVIDE RED CONCRETE DYE FOR ALL EXTERIOR POWER DUCTBANKS.
- DUCTBANK TO BE INSTALLED BELOW FROSTLINE.
- PROVIDE MARKERS ABOVE ALL CONDUITS, LOCATED WITHIN 5 FEET OF ACTUAL ROUTE AND WITH A MAXIMUM OF 300 FEET BETWEEN MARKERS (PROVIDE MARKERS ALONG BENDS AS REQUIRED TO FOLLOW CONDUIT PATH). MARKERS SHALL BE CLEARLY MARKED. PROVIDE ONE OF THE FOLLOWING DEPENDING ON INSTALLATION SURFACE:
 - DIRT: RHINO TRIVIEW 400 UTILITY MARKER OR APPROVED EQUAL
 - CONCRETE OR ASPHALT: ACP CONCRETE GRAPHICS UTILITY MARKER OR APPROVED EQUAL
- DUCTBANK CONFIGURATION AND SPACING IS PENDING FINDINGS OF GEOTECHNICAL SURVEY.

3 4X4-WAY CONCRETE ENCASED DUCTBANK
NTS